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ABSTRACT

This report is comprised of two reports: the Final Audit Report of the Hawaii English Project, submitted by the Northwest Regional Educational Laboratory, and the main report, the Hawaii English Program Project End Evaluation Report by the Hawaii English Project Staff. The Audit Report is limited to a review of data reduction, analysis, and reporting procedures and of data interpretation in the Final Evaluation Report (FER). The Project End Evaluation Report presents the results of over one year of assessment activities conducted on the Hawaii English Program in elementary schools throughout the State. This Evaluation Report contains the following chapters: I. Conclusions and Recommendations; II. Overview of Hawaii English Project; III. The Language Skills Subprogram; IV. The Literature Subprogram; V. The Language Systems Subprogram; VI. Progress Evaluations. In addition, the report contains 137 tables and 51 appendixes. In all, 79 conclusions/recommendations are made in the Evaluation Report. (DB)

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ED 064265

HAWAII ENGLISH PROGRAM

Project End
Annual Evaluation Report 1970-1971

TE 002 944

JAN 10 1972

Northwest
Regional
Educational
Laboratory

500 Lindsay Building · 710 S.W. Second Avenue
Portland, Oregon 97204 · Telephone (503) 224-3650

December 14, 1971

Dr. Shinkichi Shimabukuro
Hawaii Curriculum Center
P. O. Box 2360
Honolulu, Hawaii 96804

Dear Dr. Shimabukuro:

We have completed our review of the Final Evaluation Report and are pleased to provide you with the Final Audit Report of your project.

In the course of preparing the Final Audit Report, we examined not only the data which have been collected by your project staff, but reviewed (on a sampling basis) the procedures used for reducing, analysing and reporting the data. Additionally, the interpretations given the data were reviewed on a sample basis. Even though a few minor anomalies were detected in some of the foregoing processes, it is the general opinion of the auditor that the results presented in the Final Evaluation Report are appropriate and essentially unbiased. Specifically, our review process detected no systematic bias or errors.

The cooperation provided by your staff in the course of our audit work is appreciated; we have enjoyed working with them. Please let us know if we may be of further assistance.

Sincerely,

Mark M. Greene
by

Mark M. Greene
Director
Audit and Evaluation Section

MMG:sh
encls.

cc: George Omurra

ED 064265

FINAL AUDIT REPORT

HAWAII ENGLISH PROJECT

Submitted by

Northwest Regional Educational Laboratory
in fulfillment of an agreement with the
Office of the State Superintendent of Education,
State of Hawaii

Contract No. 352

December 15, 1971

TE 002 944

The purpose of the present document is to report the findings of an Educational Program Audit of the Hawaii English Project, (HEP). This report has been prepared and submitted in fulfillment of an agreement (Contract No. 352) between the office of the Hawaii State Superintendent of Education and the Northwest Regional Educational Laboratory (NWREL). The work specified in this agreement has been carried out by two representatives of the contractor, Dr. John E. Seger and Dr. Mark M. Greene, in consultation with project staff.

SCOPE OF THE REPORT

Three audit reports have been prepared previously by the contractor in fulfilling the terms of the agreement (see NWREL Audit Report I, dated October 12, 1970; NWREL Interim Evaluation/Audit Report, dated January 6, 1971; and NWREL Report II, dated June 1971). Because previous NWREL Audit Reports provide coverage for the majority of items included in the contract, and because of a change in audit personnel, the present report will be limited to a review of (a) data reduction procedures, (b) data analysis procedures, (c) data reporting procedures, and (d) interpretations of the data pertinent to the Final Evaluation Report (FER).

BASIS FOR THE REPORT

Pursuant to the preparation of this report, the auditor made two site visits, interviewed project staff members at all levels of the organization, spoke with classroom teachers, supervisors, and students, and reviewed the following documents:

- Final Evaluation Report (Draft Version)
- Project Proposal
- Project Evaluation Plans
- Interim Project Evaluation Reports
- Project Audit Reports
- Completed Test Protocols
- Project FORTRAN Coding Sheets
- Project Computer Printouts
- Numerous Project Documents (Internal)
  - Including: "Books Read Form"
  - "Demographic Data Sheets"
  - "Receiving Inspection, Acceptance and Inventory Reports"
  - "Absentee Reports"

The Audit method employed in preparing this report consisted essentially of a sampling procedure in which the auditor selected specific items from the Final Evaluation Report (draft version) and attempted to verify them. Verification in this case entailed the following processes: (a) review of the original or (raw) data, (b) assessment of the accuracy of the data reduction and analysis procedures, (c) comparison of reported data with the outcomes of the analysis, and (d) review of the appropriateness of the interpretations given the data. It should be noted that the foregoing audit processes were applied on a sampling basis rather than uniformly across all selected items.

FINDINGS

In the sections which follow, the audit findings pertinent to the foregoing processes will be presented.

DATA REDUCTION

The audit findings pertinent to the data reduction aspects of the HEP Final Evaluation Report have been summarized in Table 1. Entries in Table 1 consist of (a) a reference to specific items in the Final Evaluation Report; (b) data which were reported for selected items; and (c) the Audit Procedure and the Audit Finding.

TABLE 1

SUMMARY OF AUDIT FINDINGS RELATIVE
TO PROJECT DATA REDUCTION PROCEDURES

	FER REFERENCE	REPORTED DATA	AUDIT PROCEDURE AND FINDING
1.	Table 2 Equipment Damaged Units	0%	The auditor reviewed data sheets from 23 sample schools, labeled "Receiving, Inspection, Acceptance and Inventory Report" for indications of equipment damage. Four instances of reported damage were located. The base figure for the percentages in Table 2 was 716.2. Using this figure as a base, the auditor calculated a new figure (.005) which represented a negligible departure from the figure 0% which was reported.
2.	Table 4 Mislabeled cards Cards missing Books missing	1 1 set 1	The auditor reviewed original data from the "Receiving, Inspection, Acceptance and Inventory Report" forms and found the table entries to be accurate.
3.	Table 8 Third Grade - Low-Non HEP	Number=13 Mean=94.23	The auditor reviewed "Demographic Data Sheets" from the Control Schools and verified that data for 13 cases existed and that the mean was 94.23 as reported.

(Cont.)

TABLE 1

SUMMARY OF AUDIT FINDINGS RELATIVE TO PROJECT DATA REDUCTION PROCEDURES

	FER REFERENCE	REPORTED DATA	AUDIT PROCEDURE AND FINDING
4.	Grade 3 Pilot Grade 3 Control	Number=6 books read=242 Number=38 books read=105	The auditor reviewed original data from forms labeled "Books Read Form" (Control and Pilot Schools). Only 36 cases were found for the Control Schools as opposed to the 38 reported. In examining a second entry (i.e. Pilot Schools) data were located for five HEP Pilot School students. The summary figure for the number of books read was found to be 242, corresponding exactly with the tabled entry. The revised calculation of the "average number of books read by the total number of pupils" will result in a more favorable figure (i.e. 48.4 vs. the reported 40.3).
5.	Table 15 Second Grade Pilot	N=11 Mean-23.00	The auditor reviewed data coding forms pertinent to these items and found 11 students whose mean on the writing test was 23.00, corresponding exactly with the reported figure.
	Second Grade Field	N=18 Mean-25.22	Further examination indicated that data existed for 18 second grade Field School students and that the reported mean of the group (25.22) was accurately computed and reported.
6.	Table 20 Third Grade High Group	N=7 Mean=32.14	The auditor reviewed data coding forms pertinent to these items and found 7 third grade HEP (High Ability) students. The auditor calculated the group mean on the Cooperative Primary Listening Test and found it to be 32.14, corresponding exactly with the reported figure.
7.	Table 33 Third Grade	N=23 Mean=25.13	The auditor reviewed the SCAMIN Protocols for the HEP third grade students in the sample. In all, 23 protocols corresponding to this group were located. The

(Cont.)

TABLE 1

SUMMARY OF AUDIT FINDINGS RELATIVE TO PROJECT DATA REDUCTION PROCEDURES

	FER REFERENCE	REPORTED DATA	AUDIT PROCEDURE AND FINDING
			independently calculated mean for this group was 25.13, which was identical to the figure reported. Additionally, two protocols were rescored by the auditor and found to be accurately scored.
8.	Table 41 Grade 1 Field	N=19 Average number of days absent= 13.2	The auditor examined absentee reports from the Field Schools and ascertained that the data for the 19 students existed and that the mean number of days absent was 13.26. The difference between this figure and the reported figure was seen to be minor.
9.	Table 79 Source: Teachers	6	The auditor examined parent interview protocols and ascertained that 118 (the reported figure) were on hand and that six parents had indicated that teachers were a source of information about the program. The results corresponded exactly with the reported figures.
10.	Table 81 Item 2	4	The auditor examined all of the parent interview forms on hand and found that four of the forms contained entries corresponding to item 2, Table 81. The reported result was thus deemed accurate.

Summary and Opinion

Based upon the foregoing samples, the auditor views the data reduction aspect of the Final Evaluation Report as essentially unbiased and straightforward. No discrepancies in data reduction which would be capable of altering the reported results significantly were detected; only a few minor differences were noted.

DATA ANALYSIS

Relative to the topic of Data Analysis, the auditor raised two considerations:

(a) Were the analyses appropriate? (b) Were they accurately carried out?

Pursuant to the first consideration, the auditor reviewed the Final Evaluation Report and found that essentially three kinds of analyses had been employed. The first type of analysis consists of simple data tabulations or percentage calculations; the second type consists of Analysis of Variance (ANOVA); and the third type consists of Analysis of Covariance. In reviewing the Final Evaluation Report, the auditor detected no gross misapplication of any of these general techniques. In fact, the use of these three procedures seemed appropriate, not only to the present auditor, but to his predecessor as well.

Relative to the question of accuracy of analysis, the auditor employed a consultant whose specialty is statistics, Dr. Henry Baisch from the University of Portland.

Dr. Baisch, using original data provided by the project staff, calculated an analysis of covariance and compared his result with that obtained from computer programs employed by the project staff. Dr. Baisch's results were within rounding errors of that produced by the project staff. Dr. Baisch's report is appended to the present document.

In order to test the accuracy of the ANOVA program employed by the project staff, a sample problem from a standard textbook was selected. The staff employed the same computer programs which had been used in the analysis of the data for the Final Evaluation Report. The results of this test indicated that the computer program employed by the project staff produced accurate information.

In preparation of the foregoing table, a number of means and percentage figures were calculated by the auditor. These calculations represent checks upon the accuracy of the project staff's summary figures. No significant differences were observed between the calculations of the auditor and those of the staff, although minor differences were found.

Summary and Opinion

Based upon the foregoing analysis, the auditor views the data analysis procedures of the project as appropriate and fair.

DATA REPORTING

While data may be appropriately encoded or tabulated, and properly analyzed, a common source of error in many reports is that of accuracy in reporting. That is, the results of the data analysis may be improperly or inaccurately recorded in the final report. In order to assess the accuracy of the data reported in the FER, the auditor sampled ten computer printouts derived from project analysis and spotchecked sample entries in the Final Evaluation Report from each one.

The results are presented in Table 2.

TABLE 2

SUMMARY OF AUDIT FINDINGS RELATIVE TO ACCURACY OF REPORTS, RESULTS OF ANALYSES

	PRINTOUT LABEL	FER TABLE	DATA CHECKED	DATA POINTS FOUND ACCURATE
1.	Grade 2 - GAN IQ Groupings	Table 36	6	6
2.	Grade 1 - FA IQ Groupings	Table 37	7	7
3.	Grade 2 - FA IQ Groupings	Table 37	7	6
4.	Grade 2 - HW IQ Groupings	Table 16	7	7
5.	Grade K - LT By IQ Groupings	Table 18	7	7
6.	Grade K - ATS IQ Groupings	Table 40	7	7
7.	Grade K - LT IQ Groupings	Table 18	7	7
8.	Grade K - TALK	Table 21	19	19
9.	Grade K - LIST IQ Groupings	Table 24	7	7
10.	Grade K - TALK IQ Groupings	Table 25	7	7
			81	80

Relative accuracy 98.8%

Summary and Opinion

The figure given at the bottom of Table 2 reflects the extent to which tabled figures were accurately transcribed from computer printouts in the audit sample. In the opinion of the auditor, the figure which approaches 99% is well within reason. The accuracy of reporting is thus viewed as fair and adequate.

INTERPRETATIONS/CONCLUSIONS

Perhaps the most critical aspect of any evaluation report is that of data interpretation. In reviewing the interpretations of the data and data analysis in the HEP Final Evaluation Report, the auditor selected 12 of the most important conclusions and retraced the data upon which each was based. The auditor then made a judgment about the appropriateness of the interpretation. Specifically, the question was asked, "Do the data support the given interpretation/or conclusion?" The results of this activity are summarized in Table 3.

TABLE 3

SUMMARY OF AUDITOR'S JUDGMENTS
REGARDING ADEQUACY OF DATA BASE
FOR REPORTED INTERPRETATION/CONCLUSION

	FER CONCLUSIONS	WERE THEY SUPPORTED ADEQUATELY BY DATA?
1.	A. 2 The HEP Language Skills subprogram was well accepted by participating school principals, classroom teachers, students, parents, and visitors to classrooms, including several nationally-known educators.	There exists ample evidence from a variety of sources to support the stated conclusion.

(Cont.)

TABLE 3

SUMMARY OF AUDITOR'S JUDGMENTS REGARDING ADEQUACY OF DATA BASE FOR REPORTED INTERPRETATION/CONCLUSION

FER CONCLUSIONS	WERE THEY SUPPORTED ADEQUATELY BY DATA?
2. A. 3 The HEP Literature Bank I subprogram also was favorably accepted by classroom teachers, students, and parents.	There exists ample evidence from observation and interviews to support this stated conclusion.
3. C. 1 Overall there were no consistent significant differences in the performances of sample HEP and non-HEP pupils on the various data gathering instruments used in the evaluation. However, HEP children generally had higher raw score means than non-HEP students when various comparisons between groups were made.	The data displayed in Table 46 supports this conclusion.
4. C. 2 Although there were no significant differences between groups, sample children in the HEP program had consistently higher raw score means than non-HEP pupils in reading achievement.	The data presented in Tables 13, 14 and 43 do not support the conclusion as stated. A reconsideration of the data and/or conclusion is recommended.
5. C. 3 Sample children in the HEP program had consistently higher raw score means than non-HEP pupils in handwriting achievement, although a significant difference between groups was noted only in one comparison.	This conclusion is valid only when children are organized according to ability. (See Table 16)
6. There were no major differences in the overall performances of HEP and non-HEP children in listening skills achievement. However, significant differences between groups were noted on three comparisons, favoring HEP children.	The three significant differences reported are substantiated in Tables 17 and 18, but are not entirely independent. That is, one test examines difference between school types and classroom organizations; while the other test involves comparisons of ability groups. In both instances, the same children may be involved.

(Cont.)

TABLE 3

SUMMARY OF AUDITOR'S JUDGMENTS REGARDING ADEQUACY OF DATA BASE FOR REPORTED INTERPRETATION/CONCLUSION

	FER CONCLUSIONS	WERE THEY SUPPORTED ADEQUATELY BY DATA?
7.	C. 5 Overall, sample non-HEP children had higher raw score means than HEP pupils in speaking skills achievement, with significant differences noted between groups on ten comparisons. Only three of the ten significant differences favored HEP children while seven favored the non-HEP.	This conclusion is supported by data for the simple majority of the HEP-non HEP comparisons. Where only statistical differences are counted, the non-HEP group is favored in seven out of ten cases. Again, there exists the possibility that the same children may be involved in several of the comparisons.
8.	C. 6 There were no consistent significant differences in the performances of sample HEP and non-HEP pupils on the various measures used in the evaluation. When comparisons were made by ability groupings. However, HEP children generally had higher raw score means than non-HEP students in the high and medium ability groups. Between low ability groups, the non-HEP had mildly higher raw score means.	This conclusion has more support in Table 44 for kindergarten children and those in the first grade than for those in grades 2 and 3. Where the results are totaled across grades K - 3, the conclusion is valid on a simple majority basis.
9.	C. 9 The performances of the sample children in the Hawaii English Language Skills subprogram may have been hampered by the problems encountered in the delivery of HEP materials to classrooms, by the incomplete installation of certain subprograms, and the use of prototype materials in some programs at Field and Pilot schools.	The comments of the Project Staff, the logic of the situation, and the data presented in Table 1 all combine to lend credence to the conclusion.
10.	C. 13 An underlying assumption of the Hawaii English Language Skills subprogram that the learning environment inherent to the system permits the pupil to assume a greater responsibility for his own.	This conclusion is difficult to avoid upon observation of the HEP classrooms. The data presented in Tables 27-32, and appendices 12 and 13, very ably support this as well.

(Cont.)

TABLE 3

SUMMARY OF AUDITOR'S JUDGMENTS REGARDING ADEQUACY OF DATA BASE FOR REPORTED INTERPRETATION/CONCLUSION

	FER CONCLUSIONS	WERE THEY SUPPORTED ADEQUATELY BY DATA?
11.	E. 2 The data indicates that the program goal of getting students to become actively involved with literature through activities is being met.	The data would seem to indicate that teachers feel that the Literature Program encourages active participation of students. In this sense, the program goal is apparently being met.
12.	E. 4 The majority of teachers responding to the questionnaire approved of the program's approaches to developing the children's modes of expressions.	The data available from the classroom teacher questionnaire, support this conclusion quite well.

Summary and Opinion

In general, the auditor found ample evidence in the FER to support nearly all of the conclusions sampled. However, some conclusions such as C.2 and C.5 may require further study.

The findings reported in Table 3 support the Auditor's overall impression that the HEP Final Evaluation Report generally provides a comprehensive and unbiased account of the project.

Mark M. Greene
Director
Audit and Evaluation Section
Northwest Regional Educational Laboratory

Analysis of Covariance of the HEP group and Control Group

The principal sources for the computations were 1. *Introduction to Statistical Analysis* by W.J. Dixon and F.J. Massey, jr and 2. *Statistical Methods in Educational and Psychological Research* by J.W. Wert, C.O. Neidt and J. Stanley Ahmann. The analysis of covariance of the computer was checked and the adjusted means for both groups computed. An analysis ov multiple predictors was computed together with the multiple R. Tests were made for the four space equivalents to a common regression line, called a common regression hyperplane. Tests were also made for the equivalence of the slopes of the hyperplanes and whether the between and within slopes were equivalent. One test of two variable linearity for one group was made.

The results from the analysis of covariance by the computer and my results agreed within rounding error. The "F" I computed was 7.3905 compared with the computer's 7.398.

The adjusted mean on ATS-Post for the HEP group was 31.42 and for the control 26.59.

Whether there is a relationship between the controls and the ATS-Post was probed by analysis of multiple predictors. An F = 5.25 was significant at the .01 level showing a relationship. The multiple R was 0.561. It would be interesting to see if two or even one of the control variables could be used as efficiently as the three and that can be done.

A test was applied for the four variables for a common hyperplane. The results were not clearcut. The F = 3.966 was significant at .05 but not at .01 level. That is at .05 we could not claim a common regression hyperplane but we could at .01.

When the slopes of the common hyperplanes were tested for equality, I.e. are the group hyperplanes parallel, the F = 0.334 which was not significant at either .01 or .05. That is, we could assume that they were parallel.

An overall test for linearity could not be done since it requires at least three groups. Six tests for linearity could be done by using each of the control variables, one at a time against the criterion variable for each group. Only one was done, the SES for the HEP group. An F = 1.32 was not significant, suggesting that a linear relationship could be used. Looking at the data, I suspect that some non-linear relationship could be shown to be more efficient.

One can compute the F for the equivalence of the regression coefficients for within and between and it was 7.693 which was significant. However there seems to be no utility for this test if we can assume that we have a common hyperplane or that the slopes are equal.

Given, the robustness of the statistic and the unclear results of the common regression hyperplane, I would suggest that the analysis of covariance applies here.

Comments on Auditor's Report

The NWREL auditor's statement in Table 3 relating to Conclusion C-2, about HEP pupils having higher mean scores in reading achievement, is incorrect in that the conclusion is substantiated by the data shown in Table 43 of the HEP Evaluation Report. The data in Table 43 reveals that except for second graders, HEP grades K, 1, and 3 students had higher mean scores than their non-HEP counterparts in reading achievment. The data in Table 43, in turn, is supported by data shown in Tables 10, 13, and 14.

Conclusion C-2 is technically incorrect because the terms raw score means were used. The conclusion should instead state that "...sample children in the HEP program had consistently higher mean scores than non-HEP pupils in reading achievement." That is, when the intelligence (IQ), socio-economic status (SES), and pretest variables were statistically partialled out as influencing factors, HEP students did in fact have higher mean scores (adjusted means).

With regard to the auditor's statement under Summary and Opinion on page 12, relating to some conclusions requiring further study, the auditor is referring to more indepth perusal of the actual data and analyses conducted. The complexity and multi-dimensional evaluation of the HEP program requires thorough understanding of all aspects of the program as well as insight into the evaluative strategies used.

George Y. Omura, Ed. D.
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Hawaii English Project

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December 23, 1971

Dr. George Omura
Hawaii English Project
1625 Wist Place
Honolulu, Hawaii 96822

Dear George:

Your reconsideration of Conclusion C-2 appears appropriate. In my view, the significant factors in the case are:

1) Your previous statement of Conclusion C-2 was not viewed as supported by the data in Tables 13, 14 and 43.

2) The difficulty in interpretation arose when I attempted to reconstruct Table 43 from Tables 13 and 14 (Gates-McGinty Reading Achievement Test Scores).

3) As you subsequently pointed out, Table 43 is based upon Tables 13 and 14, and Table 10 (number of books read by various categories of children involved in the project).

4) It should be noted that the data in Tables 13 and 14 are not entirely independent. That is, data from the same children may be involved in Tables 13 and 14.

5) It should again be noted that the data in Tables 13 and 14 by themselves do not appear to support the conclusion*.

6) On the other hand, the data in Table 10 do support the conclusion.

7) Thus, while it appears true that the total number of comparisons in Tables 10, 13 and 14 favor the HEP groups, this finding is largely dependent upon the "books read" data found in Table 10.

*For Tables 13 and 14, the "box score" of comparisons (adjusted means) appear to be as follows: (Data from Table 10 are also presented.)

Table		Comparisons Favoring HEP	Comparisons Favoring NON-HEP
Table 13		3	3
Table 14		4	6
	Sub Total	7	9
Table 10		10	0
	Total	17	9

8) In another vein, the differences detailed in Tables 13 and 14 are, with one exception, statistically non-significant. On the other hand, the data presented in Table 10 appears not only to have the potential for statistical significance, but may well represent one of the more remarkable and positive findings of the study.

It is my opinion that the melding of data from Tables 13 and 14 with that of Table 10 may have obscured a most important outcome. Given the foregoing facts, I believe a reconsideration of your latest statement of Conclusion C-2 is still warranted. It might, for example, read:

> Relative to student achievement in reading, two indices were employed: standardized tests and total number of books read. The data relating to standardized tests yielded no conclusive results regarding the superiority of either HEP or Non-HEP students. However, when one considers the number of books read by HEP students and Non-HEP students, the results rather dramatically favored the HEP groups.

Sincerely,

Mark

Mark M. Greene

MMG:sh

HAWAII ENGLISH PROGRAM

PROJECT END EVALUATION REPORT

State of Hawaii, Department of Education
Honolulu, Hawaii
1971

ACKNOWLEDGMENT

This report presents the evaluation efforts of the Hawaii English Project staff, program planners, local district and school level staff, and students and parents in the Hawaii public school system. It is the culmination of over one full year of assessment activities conducted on the Hawaii English Program in elementary schools throughout the state.

Data collection, data analyses, and preparation for this report required the cooperative efforts of many people. The Hawaii English Project is particularly indebted to the classroom teachers, school administrators, Installation teachers, parents, and pupils who participated in the study and were sources for data collection. A note of gratitude is also extended to the countless number of other people at the state, local district, and local school levels who assisted in coordinating the implementation of the evaluation activities.

The data collection for the outcome evaluation pre- and post-tests and for the field-test trials could not have been accomplished without the cooperative efforts of the Installation teachers, the district coordinators, the fifteen parent data collectors assigned to Field schools, the five student data collectors assigned to the project evaluation section, and the short-term data collectors assigned to sample schools.

At the project level, commendation should go to Pat Zakahi, Ethel Tsugawa, Kayleen Nakamura, Betsy Nishioka, Barbara Kato, and Lurline Chock for providing the final typing and proofreading services; to Valerie Tom, Molly Matsuoka, Ann Uehara, and Margaret Ho who scored and tabulated the various test data, assisted with the typing and provided the keypunching services; to Joy McClarty and Kathleen Ing for assisting with the data collection and storage; and to Norma Carr for coordinating the data collection and analysis for field-testing.

Finally, a special note of appriciation is extended to Kim Yap, who played a major role in developing the evaluation design, conducted all computer runs and data analysis, and assisted in writing the analysis and findings of the study.

George Y. Omura, Ed. D.
Evaluation Specialist
Hawaii English Project

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I. CONCLUSIONS AND RECOMMENDATIONS

I. CONCLUSIONS AND RECOMMENDATIONS

The elementary portions of the Hawaii English Program (HEP), since its inception in 1967, has gone through several testing and revision cycles during its first four years. During its fifth and final year (1970-71), a comprehensive outcome evaluation was conducted statewide to test the effects of the Language Skills subprogram on pupil learning. Less intensive were the progress evaluations conducted on the Literature Band I and the Language Systems Elementary (grades 4-6) subprograms. These evaluative studies yield certain conclusions about each of the three English subprograms to provide basis for recommendations for future installation and development.

The discussions that follow relative to findings and conclusions of the effects of the HEP on pupil learning should be viewed with consideration for the problems that were encountered in the statewide installation of the HEP program. These problems, discussed in more detail in Section C-1 of this chapter and in Section F and G of Chapter III, relate to the delays encountered in delivery of HEP materials to classrooms, incomplete installation of certain subprograms, and the use of prototype materials in some programs in Field and Pilot schools.

A. GENERAL CONCLUSIONS

1. The outcome evaluation conducted on the Language Skills subprogram was adequately comprehensive in scope to provide basis for generalizations to elementary schools throughout the state.

   The evaluation study included a sample of 611 grades K-3 children from the three types of HEP schools (Field, Pilot, and Installation) and 365 grades K-3 pupils from non-HEP control classes. The randomly selected children for the study represented a wide range of socio-economic and ability levels, and included children from both the three-on-two and self-contained classrooms. Data was collected through the use of eight measuring instruments and through other means such as observations, record books, etc. In addition, data was collected from 42 school administrators, 117 classroom teachers, 53 on-site resource teachers (Installation teachers) in HEP schools, and 118 parents.

2. The HEP Language Skills subprogram was well accepted by participating school principals, classroom teachers, students, parents, and visitors to classrooms, including several nationally-known educators.

   In the survey of sample school principals and classroom teachers, all administrators indicated that they would select the new Skills program for a new school if given a choice and all but five teachers similarly indicated positive responses to the new program. In an interview with a subsample of sample pupils, over 94% of the children indicated they were in favor of the new program. Ninety percent of the parents interviewed likewise indicated favorable acceptance of the new program. Of 201 visitors to classrooms who completed questionnaires, only six made negative comments about the program while seven had both positive and negative reactions. All the others responded overwhelmingly in favor of the program.

3. The HEP Literature Band I subprogram also was favorably accepted by classroom teachers, students, and parents.

   In the survey of classroom teachers, over 83% of the respondents indicated that the new program was well-worth the time spent in teaching it. Classroom observation data showed that an overwhelming majority of data collectors felt that the children enjoyed the selections and activities and were actively participating in lesson activities. Similarly, over 93% of the parents interviewed favored the new Literature program.

4. The Language Systems subprogram, field-tested in Field and Pilot schools, was favorably accepted by classroom teachers.

   Through a classroom teacher questionnaire, over 82% of the respondents indicated that they would like to teach the same units they had used during the 1970-71 school year. In addition, another eleven percent reported that they would like to work with some of the units.

5. The planning and development of the new English program, the subsequent production and procurement of materials, and the installation of the program in classrooms throughout the state represent commendable efforts by project planners and staff, district coordinators and on-site resource teachers, and school administrators and classroom teachers.

   The grade K-6 HEP program was developed, tested, revised, produced, and installed in over 243 elementary classes throughout the state in a relatively short period of five years. This accomplishment, when viewed in light of the innovative nature of the learning processes of the three major subprograms and the fact that the installation of a program of this magnitude was the first in Hawaii's educational system, represents the professional dedication and the concerted and cooperative efforts of project, district, and school level staff. The development of installation materials in the Language Skills subprogram alone included over 47,277 different sets of equipment and materials.

6. The concept of the Installation teacher as a basis for introducing new curriculum designs appears to be most appropriate and practical.

   There was almost unanimous agreement by school personnel in the field that much of the success in the installation of the new English program in schools was the result of the functions of the on-site resource teachers.

B. RECOMMENDATIONS PERTAINING TO THE HAWAII ENGLISH PROGRAM

1. In its basic design, the Hawaii English Program will affect instructional content and processes from kindergarten through grade twelve. This results in a cumulative impact on each student. Inasmuch as the evaluation study involved pupils only up to grade 3, final assessment of the program should await the groups of students who have experienced the total HEP program. A long range evaluation design, therefore, should be developed, and funds provided, to measure the total effects of the program.

2. Experience with the development, production, and implementation of the Hawaii English Language Skills and Literature Band I subprograms has shown that additional revisions are sometimes required even though design specifications have been completed. As a consequence, procedures need to be developed, and funds provided, for continuous evaluation of the curriculum so that revisions and/or additions to the program can continue to be made.

3. The use of on-site resource teachers (Installation teachers) was instrumental in the success of the HEP installation in schools throughout the State. Serious considerations, therefore, should be given for the continued use of on-site resource teachers as an integral part for introducing new curriculum designs.

4. The development on contract specifications, camera-ready models, and bidding and procurement procedures and requirements, and the subsequent time constraints imposed by law for advertising and awarding of contracts for the production and distribution of materials and equipment, require that sufficient lead time be planned for the completion of all processes. The present budgeting and contract awarding systems of State government created a situation in which the HEP curriculum materials were distributed substantially after the opening of school. Plans to install innovative educational programs statewide, which require development and production of new materials should, therefore, fully consider the lead time required (8-10 months).

5. Comments from school personnel in the field indicate a strong need to provide an orientation program for school administrators, school counselors, and substitute teachers on the HEP program. In light of this, consideration should be given, and funds provided, for including those who are directly or indirectly involved with the program in the teacher training workshops on the HEP program.

C. CONCLUSIONS PERTAINING TO THE LANGUAGE SKILLS SUBPROGRAM

1. Overall there were no consistent significant differences in the performances of sample HEP and non-HEP pupils on the various data gathering instruments used in the evaluation. However, HEP children generally had higher raw score means than non-HEP students when various comparisons between groups were made.

   When various comparisons were made on the raw score means of HEP and non-HEP pupils, there were 225 instances out of 241 comparisons in which no statistically significant differences at the .05 level were noted. Only sixteen comparisons yielded statistically significant differences between the two groups, with eight of them favoring HEP and eight favoring the non-HEP

2. Although there were no significant differences between groups, sample children in the HEP program had consistently higher raw score means than non-HEP pupils in reading achievement.

   The findings of the evaluation revealed that overall HEP children had higher raw score means on seventeen comparisons as compared to nine for the non-HEP. No statistically significant differences at the .05 level, however, were noted in any of the comparisons.

3. Sample children in the HEP program had consistently higher raw score means than non-HEP pupils in handwriting achievement, although a significant difference between groups was noted only in one comparison.

   When comparisons were made on the performances in handwriting, HEP pupils had higher raw score means on twelve comparisons as compared to five for the non-HEP. A significant difference at the .05 level was noted between the low ability first graders, favoring HEP pupils.

4. There were no major differences on the overall performances of HEP and non-HEP children in listening skills achievement. However, significant differences between groups were noted on three comparisons, favoring HEP children.

   Out of 26 comparisons made on listening achievement, children in the HEP program had higher raw score means on 13 occasions. Similarly non-HEP children scored higher 13 times. Significant differences, favoring the HEP, were noted at the .05 level between the low ability kindergarteners and between the Installation school 3-on-2 and the control 3-on-2 children. A significant difference at the .01 level was also noted between high ability first graders, again favoring the HEP.

5. Overall, sample non-HEP children had higher raw score means than HEP pupils in speaking skills achievement, with significant differences noted between groups on ten comparisons. Only three of the ten significant differences favored HEP children while seven favored the non-HEP.

   When comparisons were made on the performances in speaking skills, non-HEP children had higher raw score means on 46 occasions and HEP pupils scored higher on 32 comparisons. Significant differences at the .05 level, favoring HEP children, were noted between the high ability kindergarteners in the listening portion of the test and between the high ability first graders in both the talking and total score portions of the test. Significant differences at the .05 level, favoring the non-HEP children, were noted between the low ability first graders in talking and total score, between the high ability second graders on the listening score, between the medium ability second graders on the talking score, and between the high ability third graders on the talking and total score portions of the test. The comparisons also yielded significant differences at the .01 level, favoring non-HEP pupils, between control and pilot school second graders.

6. There were no consistent significant differences in the performances of sample HEP and non-HEP pupils on the various measures used in the evaluation, when comparisons were made by ability groupings. However, HEP children generally had higher raw score means than non-HEP students in the high and medium ability groups. Between low ability groups, the non-HEP had mildly higher raw score means.

The comparisons by ability subgroupings revealed that the HEP high ability students had higher raw score means on 20 occasions, while the non-HEP had higher scores in 19 instances. Significant differences at the .05 level were noted on seven comparisons, three favoring HEP and four favoring the non-HEP. A significant difference at the .01 level was found in one comparison, favoring the HEP children. Between the medium ability children, HEP pupils had higher raw score means on 15 comparisons as compared to 13 for the non-HEP. The comparisons yielded only one significant difference at the .05 level, favoring the non-HEP. The findings between the low ability students showed that non-HEP children had higher raw score means on 20 comparisons, while the HEP pupils had higher scores on 19 occasions.

7. There were significant differences in reading achievement, favoring HEP, between medium and low ability HEP and non-HEP third graders.

In a separate study comparing reading achievement of third graders at an HEP Field school and a comparable non-HEP school, the findings revealed that the medium and low ability third graders in the HEP program scored significantly higher in vocabulary and reading comprehension than their non-HEP counterparts ($p < .05$ between medium ability students and $p < .01$ between low ability pupils). No statistically significant differences were found between the high ability students.

8. There were significant differences in reading achievement between HEP and non-HEP second graders, favoring HEP children.

In another study comparing second graders at an HEP Field school and a comparable non-HEP school, the results showed that there was a significant difference at the .05 level in reading achievement, favoring the HEP pupils.

9. The performances of the sample children in the Hawaii English Language Skills subprogram may have been hampered by the problems encountered in the delivery of HEP materials to classrooms, by the incomplete installation of certain subprograms, and the use of prototype materials in some programs at Field and Pilot schools.

The initial difficulty encountered by the HEP project staff was the late approval of the Department of Education budget by the State government. Installation of the HEP package was set for two increments: September and December. However, because of the later award of contracts, unforseen production problems, specification changes, cancellations, and changes in shipping schedules, the first deliveries were not made until late September and early October. In addition, a few commercial books were out of stock, and two software items were rejected because of generic defects. As a consequence, projected delivery of materials to three-on-two classrooms were delayed from 3-73 days, and for the self-contained from 13-45 days.

The installation of the HEP package in schools throughout the state made heavy demands on project planners during the school year. Consequently, planners were unable to fully field-test and revise materials for the advanced levels needed by second and third graders in Field and Pilot schools. These students, therefore, were only able to utilize prototype materials at the advanced levels during the course of the year.

It would be reasonable to assume that these foregoing difficulties had an effect on the achievement gains that were reasonably anticipated from sample HEP pupils used in the evaluation study.

10. There are some indications that pupils who might be considered socially and economically disadvantaged are making positive gains as a result of the Hawaii English Language Skills subprogram, when comparisons were made with non-HEP students.

The analyses conducted on the socio-economic status (SES) data revealed that HEP sample children had higher SES mean scores (higher scores indicate lower socio-economic status) than non-HEP pupils. In spite of their lower socio-economic status, children in the HEP Skills program overwhelmingly outperformed their non-HEP counterparts in number of books read and in teachers' rating on fourteen selected items determined to be indications of pupil self-direction.

11. Among the pupils using the Hawaii English Language Skills subprogram, children in the three-on-two classrooms had higher raw score means than pupils in the self-contained. Among the pupils in non-HEP settings, children in the self-contained classrooms performed better than children in the three-on-two.

Data from comparative analyses reveal that among HEP children, kindergarteners in the Installation school and first graders in both Installation and Pilot school three-on-two classrooms outperformed their respective HEP self-contained counterparts in sixteen of 26 comparisons. Only the kindergarteners in Pilot school self-contained classrooms performed better than their three-on-two counterparts. It should be noted, however, that delivery of HEP materials was made considerably later to self-contained classes than to three-on-two classrooms. Within the control non-HEP group, children in the self-contained had higher scores on 12 comparisons as compared to five for the three-on-two children.

12. The operation and curriculum of the Language Skills subprogram are consistent with the HEP program design statement.

The Northwest Regional Educational Laboratory, contracted to conduct an educational audit on the evaluation of the Hawaii English Program, has confirmed the foregoing statement through extensive interaction with HEP project staff, visitations to school districts, consultations with district HEP coordinators, and visitations to schools.

13. An underlying assumption of the Hawaii English Language Skills subprogram that the learning environment inherent to the system permits the pupil to assume a greater responsibility for his own learning was confirmed by the results of three data gathering instruments used in the study.

Data from 52 classroom observations revealed that over 85% of 103 grades K-3 pupils observed demonstrated some degree of independent, self-directed behavior based on nine behavioral characteristics. Over 69% of these students exhibited self-directed behavior most of the time, as determined by data collectors, and 17% demonstrated the characteristics some of the time. These 103 students were also observed to enter independent activity over 171 times during the course of the observations and spent an average of 22.4 minutes in it per session. When all pupils in the sample classes were observed, children were observed to enter more independent activities than any other activity. In all instances, there were no major differences in the behavior of children in three-on-two and self-contained classes.

Through interviews with a subsample of HEP children, over two-thirds indicated that they were given the opportunity to select their own learning activities. Another 6% indicated that they were involved with teachers in the planning/decision-making processes.

Comparisons on fourteen selected behavior characteristics considered to be indicators of pupil self-direction revealed that HEP children at all grade levels (gradesK-3) were rated higher than their non-HEP counterparts in all or a predominant majority of the 14 items. Between kindergarteners, HEP pupils were rated higher than their non-HEP counterparts in meeting the behavior criteria in 10 of the 14 items. Between first and second graders, the HEP children did as well as or better than their control counterparts in 12 of 14 items, while the comparisions between third graders revealed that HEP pupils as a group performed better in all fourteen items.

14. Data gathered in the evaluation supports the contention that the HEP Language Skills subprogram offers an individualized approach to learning.

Classroom teachers, school administrators, and Installation teachers overwhelmingly agreed through questionnaires that individualization was the most positive aspect of the new program. Visitors to classrooms also overwhelmingly endorsed the individualized nature of the program. Of 201 classroom visitors who completed a questionnaire, 106 felt that individualization was the most desirable aspect of the HEP program. The wide range of reading levels entered and completed, as revealed by the scores on the reading diagnostic stack, provide further support to the foregoing conclusion.

15. The peer-tutoring system, an inherent aspect of the learning approach in the HEP Language Skills subprogram, is being fully and positively implemented and utilized, as shown by data gathered in the evaluation.

Responses to questionnaire items revealed that the majority of classroom teachers, school principals, and Installation teachers felt that the use of students as tutors was a positive element of the new Skills program. In interviews with students, over 83% indicated they had been tutored by others. Over 77% of the children responded that they enjoyed tutoring others, and over 80% of the students replied that they enjoyed being tutored by others. Parents also were in favor of the tutoring system, with over 87% of those interviewed indicating favorable responses to the questionnaire item.

16. The impact of the Hawaii English Language Skills subprogram had positive carry-over effects in other instructional areas and in other social situations.

Interviews with classroom teachers, school principals, Installation teachers, and district coordinators revealed that many instructional practices identified as being that of HEP-based techniques (e.g. peer-tutoring, recordkeeping system, etc.) were being introduced in other curriculum areas. The major direct transfer appeared to be primarily in arithmetic. Among the most notable behavioral changes noticed as a result of HEP, classroom teachers, school administrators, and Installation teachers listed the following: children appeared to be more comfortable with adults and in relating to them, students were more willing to help and be helped by others, there were less behavioral problems in the classrooms, and the tutoring relationships helped to break down social cliques and social isolate structures. Furthermore, the foregoing respondents added that pupils in the HEP program were developing more acceptable behavioral characteristics.

17. The HEP Skills subprogram appeared to help in the development of more positive attitudes about school and schoolwork among children, particularly in the areas of reading and writing.

Over two-thirds of the students interviewed indicated reading and writing as being two of the four best-liked aspects of the new program. The foregoing data was supported by parents, through interviews, when over one-fourth of the parents felt that their children liked reading the best. None of the parents indicated that their children disliked reading, when asked to list aspects disliked by their children. Data gathered on the number of books read further show that among HEP children, the range of books read averaged from 4 to 27 books in grades K-3, whereas non-HEP children read an average range of about two books each (books in regular reading program).

In the analyses on the attitudes of children toward school and school activities, HEP children who have been in the program longer (e.g. Field and Pilot second and third graders) indicated consistently more positive attitudes about school than non-HEP pupils. Similar results were obtained on the same scale when analyses were conducted by ability subgroups. Except for the low ability kindergarteners, HEP children in all other ability groupings and grade levels were consistently more positive in their attitude about school than their non-HEP counterparts. Several school personnel in the field also indicated through interviews and anecdotes that children were arriving in school earlier and stayed in the classroom during recess, lunch hour, and after school to work on both HEP and non-HEP learning activities.

18. The Hawaii English Language Skills subprogram appeared to be profitable for children of all levels of ability, including those who were considered non-English speaking.

Comments from the field indicate that children in all ability levels profited from the HEP program, including the educationally mentally retarded and the non-English speaking. School personnel revealed through interviews that students from the upper non-HEP grade levels (e.g. grades 4-6), who were utilized as student tutors and aides also appeared to profit in learning from the various skills components. Classroom teachers, school administrators, and Installation teachers polled through questionnaires further supported this contention that the new Skills program was beneficial for all types of students. Only less than one percent felt that the program was of no help or harmful to students. Comparative data from test results confirm the foregoing generalizations. Out of 65 comparisons, children in the HEP high and medium ability subgroups had higher scores than their non-HEP counterparts on 38 occasions. In another study between HEP and non-HEP second and third graders, significant differences favoring the HEP group were noted between the low and average ability students.

19. The tradition-worn notions that primary level children (kindergarteners in particular) are incapable of assuming a predominantly academic orientation in school and therefore should not be responsible for structuring their own learning cycles are being challenged by the responsible behavior demonstrated by children in the learning environment created by the new Skills system.

The previously described findings on independent and self-directed behavior of HEP pupils provide adequate evidence that the younger children are in fact quite capable of making appropriate decisions about their learning activities. Furthermore, comments made by classroom teachers on the extent to which kindergarten age children are able to master subject content areas reveal additional support to the foregoing conclusions. Opinions gathered from classroom teachers, school administrators, and Installation teachers through questionnaires indicate that primary-age children in the HEP program are actively involved in the decision-making processes and are making adequate achievement gains in self-imposed learning activities.

20. Although there were undoubtedly wide variations in classroom management practices, the new Skills program was being used as intended in the majority of classrooms using HEP throughout the state.

Through a systems adherence questionnaire completed by Installation teachers, the majority of classes supported by Installation teachers conducted their classes based on the protocols of the HEP system.

21. Generally, the experimental and control groups associated with the evaluation activities of the Hawaii English Program were not substantially affected by the study.

Only two incidents were reported where sample classes were somewhat affected by the evaluation study. In one incident, anxiety on the part of teachers whose students were in the HEP sample was reported. In the other, a similar state of anxiety developed on the part of teachers whose students were in the control group. Several teachers also reported that randomly selected sample students from HEP classes seemed to over-represent the low ability, immature end of the student continuum. This fact was confirmed by the ability scores collected for selected second and third grade sample groups.

22. A dramatic and positive change in the role of classroom teachers and school administrators appeared to develop as a result of the new English program.

Aside from the previously discussed findings on self-directed behavior of pupils and the acceptance by teachers that children can make responsible and appropriate decisions regarding their own learning activities, classroom teachers reported through interviews that while the demands of the systematized Language Skills subprogram made them more tired physically when the program first began, the fatigue factor was reduced as both teachers and students became more familiar with the new program. With the reduction of the fatigue factor, teachers reported having and spending more time for planning in other subject areas. In addition, HEP provided them with teaching methodologies and concepts that, in their contention, led to improvement of instruction in other areas. Other comments from the field included: (1) principals were reported to have visited classes using the HEP more often; (2) teachers had revised their opinion about the extent to which kindergarteners could master subject areas; (3) many administrators indicated that weak or poor teachers have a better chance in working toward improvement by teaching in the HEP; (4) the record-keeping system of HEP assisted the principals in their supervisory/administrative roles; (5) a better rapport was developed between teachers, principals, and students as a result of the socially interacting nature of the Skills system; (6) the systematized approach in the Skills program helped to define more clearly the teacher's role in the classroom; (7) principals and Installation teachers reported that teachers appeared to be more relaxed and developed less anxieties when school administrators visited classrooms; and (8) kindergarten teachers reported that they felt more academically oriented in their role in the HEP, as compared to the traditional role of being primarily responsible for readiness activities.

23. The individualized and systematized nature of the new Skills subprogram presented no problems in terms of continuity for learning and reduces the need for retention of pupils in the same grade level.

Classroom teachers reported that children returning from absences, long weekends, holidays, etc., encountered no difficulties upon their return to the classrooms. It was further reported that the diagnostic processes inherent in the Skills program enabled children to enter skills areas based on individual deficiencies and needs, thereby reducing the need to retain pupils in one grade level.

D. RECOMMENDATIONS PERTAINING TO THE HEP LANGUAGE SKILLS SUBPROGRAM

1. On the basis of the relatively favorable performances attained by children using the program, it is recommended that the Hawaii English Language Skills subprogram be continued as the basis for language skills instruction at the elementary grade levels.

2. The evaluation of the Skills subprogram revealed that HEP-based instructional practices and processes are being introduced in other curriculum areas. A more comprehensive study should be conducted to determine whether the utilization of these techniques is developing positive effects, and whether formalized procedures should be developed to implement the techniques that are found to be favorable for the improvement of instruction.

3. Reports from classroom teachers in the field indicate a general feeling that only minor adaptations of the HEP protocols should be made during the first-year use of the Skills subprogram. This appears to be based on the rationales that unfamiliar materials should not be manipulated and adapted, and that classroom teachers do not really come to know the HEP system until they have used it for a full year or more. The present constraints of not permitting major adaptations to the HEP system by first year teachers in the HEP, therefore, should be continued in future installations.

4. The results of the evaluation suggest that the non-English speaking and all ability subgroupings of children are making favorable progress in the Language Skills subprogram. A more comprehensive exploration of the impact of the Skills subprogram on these children should be considered in future evaluation studies.

5. Comments from school personnel in the field and findings from a separate study conducted at a Pilot school suggest that different approaches for scheduling student use of materials and equipment can be successfully implemented without adversely affecting pupil progress. Investigation into alternative practices for shared utilization of HEP materials and equipment should, therefore, be further explored.

6. The Department of Education should seriously consider the establishment of a repair/maintenance center. The growing number of materials and equipment being installed in schools and the unsatisfactory services provided by vendors, as reported by school level personnel, require that long-range plans for such facilities and personnel be fully explored.

7. Steps should be taken as early as possible to orient upper grade level classroom teachers (grades 4-6) to positively accept and relate with children who have learned to become self-reliant and independent in the Skills subprogram. Comments through interviews indicate that teachers who are unfamiliar with ways in dealing with these independent and self-directed youngsters may create problems not only for themselves, but for students alike, when these pupils are promoted to the upper grade levels.

8. The installation of the Language Skills subprogram in more and more classrooms throughout the State will soon deplete the number of non-HEP control students available for comparative study purposes. Furthermore, the criterion- or reference-based technique for assessing pupil achievement appears to be more appropriate for innovative and individualized educational programs such as the Skills subprogram. Plans for long-range evaluation of the Skills subprogram, therefore, should seriously take into consideration this method of assessing pupil progress within the program.

E. CONCLUSIONS PERTAINING TO THE LITERATURE SUBPROGRAM

1. The results of the study support the assumption of the HEP Literature curriculum that literature can be taught in an enjoyable manner in ways which are consistent with the nature of literature as art.

The Literature program developed from three basic assumptions: 1) that literature is a way of knowing; 2) that its processes are those of symbolic form; and 3) that its medium is language. These assumptions influenced the design, the choice of selections, and the activities which students engaged in. The activities were particularly devised to assure that students had an enjoyable and varied experience with the many stories and poems in the program, as well as assuring that verbal and other expressive skills would be developed. The general response toward the program on the part of students, teachers, and parents has been positive and supportive. When asked whether they felt the time spent teaching the HEP Literature could more profitably be spent on another subject, only three teachers out of 83 felt that it could. Over 83% of the respondents felt that it was well worth the time spent teaching it. The data from parents indicate that they favor an organized literature program for the primary grades, and their responses indicated that they considered the HEP Literature program to be very creative and helpful for their children. Their comments also indicated that their children were responding favorably to the selections and activities, and comments from teachers and data gatherers supported this point.

2. The data indicates that the program goal of getting students to become actively involved with literature through activities is being met.

When asked whether the program encouraged active participation, explorations, and/or discoveries on the part of the students, over 94% of the teachers felt that it encouraged active participation and explorations; 93% felt that it allowed for student discoveries.

3. The data also indicates some agreement among teachers that the program helps children develop modes of expression.

The agreement among teachers was almost unanimous that the program had helped their children to express themselves better. Fifty to 60% felt that the children had become more fluent than previously in ideas, in speaking, and in perception. Teachers also indicated that pupils became more imaginative and creative in art work; more expressive and creative in dramatics, music, and physical activity. Ninety-eight percent felt that the program encouraged divergent responses and/or expression from the students.

4. The majority of teachers responding to the questionnaire approved of the program's approaches to developing the children's modes of expressions.

About 93% of the teachers were in favor of the "talking through puppets" approach, 88% with the "making up stories" approach, and 92% with the "body movements" approach.

5. The protocols established by planners for conducting the HEP Literature subprogram were generally adhered to.

Over 46% of the teachers responding to the teacher questionnaire indicated that the Literature subprogram was conducted daily, and 82% stated that they spent between 20-40 minutes on each lesson. Observation data collected from 48 sample classrooms and responses on the questionnaire further showed that many teachers were taking advantage of the flexible nature of the program (the many options it provides), although it was evident that additional work with teachers in managing the program is necessary.

6. There appears to be favorable carry-over effects of the Literature subprogram on related subject areas, as indicated by classroom teachers.

The majority of teachers felt that the HEP Literature subprogram appeared to stimulate motivation and interest in reading among pupils, and almost all teachers indicated that the program had helped develop the children's ability to express themselves better. Similarly, many teachers felt that the children were being helped to develop better listening skills and habits. Teachers also felt that pupils had learned to follow directions better, became more interested in books, and were able to comprehend better in other reading activities.

7. Despite the limited time the Band I program has been in the classroom, many teachers felt that some growth in knowledge and understanding of literature was observed among children as a result of the HEP Literature subprogram.

About 30% of the respondents indicated some growth was noticed, supporting their assertions with comments such as "Children can see similarities and differences between stories," "greater imagination and concentration," "increased vocabulary," "appreciate and enjoy selections," etc. Over 89% felt that the program had helped the students develop the ability to establish relationships among stories and characters.

8. Data from classroom teachers and observations indicate that the HEP Literature subprogram is adequately flexible to provide for participation in varying grouping patterns.

Between 87-98% of the teachers indicated that the program provides opportunities for participation in large, small, and individual activities. These findings were also supported by observation data collected from 48 sample classrooms.

9. The majority of teachers and students indicated that they were in favor of the HEP Literature program; some teachers, however, had reservations about the appropriateness of some of the selections and activities suggested for the program.

While 67% of the teachers felt that all of the activities were appropriate for the corresponding selections, 33% did not feel that all of them were. Only about one-third felt that all of the suggested activities were necessary for the corresponding selections. Sixty-five percent of the respondents felt that the suggested activities were appropriate for the intended grade levels.

10. Teachers generally felt that the HEP Literature subprogram seemed to meet the needs of the high and average ability pupils. However, they were not as convinced that the program met the needs of the low-ability and non-Eniglish speaking youngsters.

Over 90% of the classroom teachers felt that the new Literature program met the needs of the high ability pupils, 95% felt it was suitable for the average, 58% for the low-ability, and 22% for the non-English speaking children. However, 17% of the respondents also felt that the program met the needs of pupils of all ability levels.

11. The insufficient quantity of software materials and the logistical problems associated with the sharing of the literature materials appeared to be the two areas of concern among classroom teachers.

Only 59% of the sample teachers felt that the quantity of materials distributed for classroom use was adequate, while only 41% felt that the sharing of the materials on a rotational basis was satisfactory.

F. RECOMMENDATIONS PERTAINING TO THE HEP LITERATURE SUBPROGRAM

1. In the light of data indicating positive attitudes of teachers, pupils and parents toward the HEP Literature subprogram, and in view of the fulfillment of its goals in terms of pupil participation, involvement, and enjoyment in the program, it is recommended that the program be continued as an integral part of the school day.

2. In the light of the concerns expressed by some teachers about the appropriateness of some of the suggested selections and activities, it is recommended that project planners further examine the selections and activities in terms of their appropriateness for various types of students and make necessary revisions for future installations.

3. Based on the findings of this study that the new Literature program presents some problems for the low ability, immature, and non-English speaking pupils, project planners should investigate the possibilities for revising and/or supplementing the program with materials more appropriate for these types of children.

4. The evaluation of the HEP Literature Band I subprogram, conducted during the 1970-71 school year, was somewhat limited by the nature of the Band I activities and the maturity levels of the pupils involved (grades K and 1). To provide more substantial data about the effects of the program, a more comprehensive evaluation on the advanced levels of the program (e.g., Band II, Band III, and Band IV) should be conducted as these subprograms are implemented in schools throughout the state.

5. In the light of the problems associated with the inadequate quantity of materials for classroom use, and the logistical difficulties encountered by schools in the rotational sharing of materials, educational decision-makers should seriously consider allocating additional funds for increasing the quantity of the new literature materials for classroom use so that the projected plan of one complete set per school is realized as rapidly as possible.

G. CONCLUSIONS PERTAINING TO THE LANGUAGE SYSTEMS SUBPROGRAM

1. There were no significant differences in achievement gain between HEP and non-HEP pupils, as measured by an HEP-developed achievement test, in knowledge about languages and understanding of the linguistics discipline. However, higher raw score means were attained by HEP pupils.

   The results of the "Neptunian" test, administered to a sample of HEP and non-HEP fourth graders at the end of the 1970-71 school year revealed no significant differences in raw score means at the .05 level. However, raw score means among sample HEP pupils were higher than scores attained by control non-HEP children in four of the six comparisons.

2. The Language Systems subprogram appears to have favorable effects on pupils of lower academic aptitude and on children who have lower socio-economic backgrounds, when comparisons were made with non-HEP children.

   Analyses on aptitude and socio-economic data of the sample HEP and non-HEP children used for the study revealed that the HEP students had significantly higher socio-economic status (SES) scores (indicating lower SES backgrounds) and significantly lower aptitude scores than their non-HEP counterparts ($p < .01$). Despite these two unfavorable influencing factors, HEP students had consistently higher raw score means on the "Neptunian" test, when comparisons were made with non-HEP children.

3. There are strong indications that the Language Systems subprogram, as implemented for field-testing, has a more favorable effect on children with higher reading abilities than on pupils with a lower reading ability level.

   Analyses conducted on reading ability data of the HEP sample subgroups revealed that there were significant differences ($p < .01$) between the high, medium, and low ability children on the "Neptunian" and STEP reading test scores, favoring children with higher reading abilities. A high correlation was also found between the two tests (.57; $p < .01$).

4. The results of the study on the Language Systems subprogram confirms, to some extent, the postulation that the urban environment, as compared to the rural setting, is more conducive to development of linguistic abilities.

   The results of comparisons made between sample urban and rural HEP children on the "Neptunian" test revealed significant differences ($p < .01$) within groups, favoring urban school pupils. Raw score means on the unit Review tests also revealed that rural school children generally had lower scores than those from urban settings.

5. Of the eleven Language Systems units that were field-tested, classroom teachers preferred the Dialects, International Languages, Animal Communications, Social Uses of Languages, and Sounds units the most.

   Through a classroom teacher questionnaire, between 63-80% of the respondents who used these five units indicated their preference for these units. Least preferred were the Sign Languages and Symbols Systems units, as indicated by 36% and 46% of the teachers respectively.

6. In the opinion of classroom teachers, the Sounds unit appeared to be the most appropriate unit for the grade levels it was intended (Grades 4-6).

   Over 90% of the ten teachers using the Sounds unit gave the two highest rating to this unit on a four-point rating scale. Least appropriate was the Sign Languages unit. Similar ratings by teachers indicated the most and least appropriate units by grade levels to be: 4th grade--most appropriate: Advertising, Sounds, and Animal Communications; least appropriate: International Languages and Dialects; 5th grade--most appropriate: Social Uses of Languages and Symbols Systems; least appropriate: Sign Languages: 6th grade--most appropriate: International Languages, Dialects, Sounds, and Animal Communications; least appropriate: Symbols Systems, Sign Language, and Advertising.

7. The majority of teachers were in the opinion that the Teachers Manuals for each unit were generally very useful for classroom instruction.

   Comments and responses on the unit-end evaluation questionnaires indicated that the suggested plans and activities were generally quite helpful for teachers to use. The major concerns were related to requests for inclusion of specific items of information that would help teachers use the manual more efficiently.

8. The technical problems associated with resource materials distributed with each unit appeared to be minimal.

   In general, most of the teachers encountered only a few problems with the resource materials. Most frequently mentioned were problems related to production capabilities, rather than to those designed or conceptualized by planners (e.g. audio quality of tapes, films, etc.).

9. In general, the objectives developed for each unit were clearly stated. However, teachers had some difficulty in meeting all of them.

The analyses conducted on the data from unit-end evaluation questionnaires revealed, almost without exception, that unit objectives were clearly stated. Completing all of them, however, presented some problems. The most consistent reasons for not being able to meet all stated objectives were lack of time and difficulties encountered by pupils with required tasks because of the academic orientation of the tasks.

10. Contrary to program assumptions, there are some indications that the sequence of units taught is an important factor in the effectiveness of learning taking place.

Although over 67% of the teachers indicated that the sequence of units taught did not make a difference, the relatively high percentage (32%) of teachers who felt otherwise reflects some concern that needs to be considered.

11. There are strong indications that teachers using the Language Systems units will need to require more content and discipline-oriented background before they feel comfortable and competent about teaching the units.

Responses to various items on the classroom teacher questionnaire and the unit-end evaluation questionnaires were fairly consistent in suggesting a need for more unit content orientation. Teachers relied heavily on the Teachers Manuals in conducting their daily lessons. Furthermore, suggested activities and resources listed in the manuals were consistently listed as being useful guides for classroom instructions.

12. Aside from the Sounds units, teachers were in the opinion that many of the tasks required in each unit generally were too verbal and academic-oriented.

Comments by teachers through the end-of-the year questionnaire and the unit-end evaluation questionnaires indicate that tasks which were activity-centered rather than those bound by academic ability constraints were the most successful activities conducted in class. On the other hand, least successful were the activities that required students to have a certain amount of academic/verbal skill. Results on achievement gain measurements on pupils also support this postulation.

13. In the opinion of classroom teachers the allotted time of 3-4 weeks is much too short to complete each unit.

Respondents on the unit-end evaluation questionnaires were overwhelmingly in the opinion that the allotted time of 3-4 weeks was inadequate for completing the units. Only with the Social Uses of Languages unit did the majority (60%) of the teachers feel that the allotted time was adequate.

H. RECOMMENDATIONS PERTAINING TO THE LANGUAGE SYSTEMS SUBPROGRAM

1. Preliminary findings, on comparisons made between HEP and non-HEP children and through classroom teacher questionnaires, seem to indicate favorable acceptance of the Language Systems subprogram by classroom teachers and positive achievement gains made by children using the Systems materials. *Continued expansion and installation of the Language Systems subprogram, therefore, is recommended.*

2. The evaluative studies on the elementary Language Systems subprogram (grades 4-6) may be considered as progress evaluations, primarily conducted to provide planners with feedback for program modifications and revisions. *Steps should now be taken to conduct a more comprehensive outcome evaluation on the total effects of the Language Systems program on pupil learning.*

3. In light of the findings on the effects of the Systems subprogram on children with low reading ability, it is recommended that *project planners further examine the appropriateness of the various units and activities, and make necessary revisions where appropriate.*

4. *The Teachers Manuals for the various units need to be developed with a more consistent organizational format. Steps should also be taken to incorporate suggestions for inclusions of specific items or information that will help teachers use the manual more efficiently.* Comments from teachers in the field indicate the foregoing to be the major concerns relating to the manual.

5. Responses on the unit-end evaluation and end-of-the-year questionnaires indicate a consistent concern expressed by classroom teachers that the various unit activities are too difficult and too academic and research oriented for children, particularly for low-ability pupils. *It is therefore recommended that appropriate steps be taken to rectify this problem.*

6. Although the Language Systems subprogram assumes that the sequence of units taught is not an important element on the effectiveness of learning that takes place, over one-third of the classroom teachers indicated that the sequence of units taught had some implications for pupil learning. *Exploration into this aspect of the development processes, therefore, needs to be conducted and necessary steps taken to resolve the problems, should the findings show that program achievement is adversely affected by the organizational distribution of units.*

7. Responses to various items on unit-end and year-end teacher questionnaires suggest a strong need felt by teachers that *more content orientation be presented in future teacher-training workshops.*

8. The projected allotment of 3-4 weeks to complete each unit appear to be too short a period of time, as indicated by classroom teachers. *Serious consideration, therefore, should be given to revising the rotational schedule for sharing the Language Systems materials.*

II. OVERVIEW OF THE HAWAII ENGLISH PROJECT (HEP)

II. OVERVIEW OF THE HAWAII ENGLISH PROJECT (HEP)

A. Description of the Hawaii English Project

1. Brief History of the English Project

The Hawaii English Project was established in May of 1966 as the major development project of the Hawaii Curriculum Center (HCC). Funded under Title III of the Elementary and Secondary Education Act, HCC was a joint activity of the State Department of Education and the University of Hawaii. In subsequent years, the English Project came under the supervision of the Director of the Curriculum Development and Technology Branch of the Instructional Services Division of the State Department of Education.

The Hawaii English Project was established as a result of a widely recognized need to redefine the basic programs of English for schools in Hawaii in light of contemporary knowledge and a clearly enunciated statement of educational purpose for the schools. The Curriculum Survey of 1965, a major review of academic programs in Hawaii's public schools, revealed serious inadequacies in the language arts program in the State. The survey findings, evaluated in light of new scholarship in the field of English, modern theories of learning and instruction, and emerging curricula from national study centers, led to the decision to design an English curriculum specifically for Hawaii. The charge to the English Project was to develop a tested curriculum and to plan for its dissemination to the schools. The target date of fall, 1971, was set for the completion of the grade K-12 English project, with materials to be made school-ready within two years following completion of the development phase.

In 1968, a major policy change altered the direction and scope of the English Project. The State Board of Education urged the Department of Education to accelerate the rate of installation of the HEP program in schools. In view of the Board's request, plans were developed for completing a grades K-3 Language Skills package and a grades K-2 (Band I) Literature package for installation in September 1970. In addition, a grades K-6 English curriculum was set for implementation by September of the following year. Progress of the secondary curriculum (grades 7-12) was temporarily halted until installation of the K-6 curriculum got underway. Segments on the secondary portions had been developed and tested.

At its January 8, 1970, meeting the State Board of Education reiterated its previous position of installing at lease one HEP package in every elementary school throuthout the State, provided funds were available.

In 1970, the State Legislature approved the Department's recommended budget for one three-on-two HEP installation in every elementary school in the State ($968,225). An additional appropriation of $500,000 was also made to install HEP in 80 self-contained classrooms.

The allocated funds enabled the HEP to be installed in 133 three-on-two and 110 self-contained grades K and 1 classrooms throughout the State during the 1970-71 school year. In addition, fifty-three Installation teachers (on-site resource teachers) and remote-area teachers were assigned to help teachers with the installation. A total of 14,850 pupils in grades K-6 were involved with the HEP program in 1970-71. Of this total, 13,410 pupils were involved in the grades K-3 Language Skills and Literature Band I subprograms, 960 students in the Language Systems grades 4-6 subprogram, and 480 children in the Literature Bands II and III subprograms.

The five-year Hawaii English Project terminated its initial funding under Title III of the ESEA in August of 1971. Provisions are now being made to transfer the responsibility for installation of the elementary HEP program from the Curriculum Development and Technology Branch to the General Education Branch of the Department of Education. In addition, a new five-year project to complete the secondary English curriculum (for grades 7-12) got underway in September, 1971.

2. Program Development

The English Project planning teams undertook to provide some solutions for the persistent problems of language instruction by way of a systems approach. They were charged with accounting for the following aspects in a program designed for maximum language growth for all children and youth in the schools:

a. The State's policy that man's capacity for language (for utilitarian, aesthetic, and educational purposes) be enhanced to the fullest degree.

b. A clear definition of the field of English, including the language itself, its use in speaking and writing, and its creative shaping into literature.

c. A carefully-sequenced plan for a curriculum in which new knowledge builds upon what has gone before and repetition is reduced.

d. A set of learning materials for students so designed that each child's individuality is respected to the highest degree possible and his individual progress is not inhibited.

e. Guides for teachers using the materials.

f. Classroom equipment and organizational arrangements to be used with the materials.

g. Evaluation instruments for assessing students' progress and monitoring their school experiences, including reporting to parents.

h. A teacher training program and suggested materials for the program.

i. A plan for the installation of the program in the schools, including cost factors, training schedules, and other administrative plans.

The principal activity of the project involved the production, testing, and procurement of instructional design and materials. In addition, the Project conducted a number of collateral activities. Among them were (a) the training of supervisors, coordinators, resource teachers, and classroom teachers; (b) the demonstration, testing, and evaluation of published programs which could be incorporated into the Project's curriculum; (c) the design of new university course offerings in language and literature; (d) participation in reconstituting the University's pre-service program for teachers of English; (e) consultation services to the schools; and (f) participation in the Department's planning, programming, and budgeting (PPB) for the statewide English program.

3. Emphases in the Hawaii English Program

The Hawaii English curriculum is in many ways a distinct departure from existing programs, local and national. It is theoretically coherent; it is simpler and more economical in structure and organization than the existing program; it is integrated to the extent of reducing or erasing some of the conventional divisions of this area of study, yet on the other hand it is discrete in maintaining the integrity of each separate area; it is modern in content and approaches, introducing whole new substantive concerns through inquiry and problem-solving methods which are not characteristic of traditional programs. The planning teams tried to consider the nature of a sound curriculum in language and literature in the larger perspective of what a good elementary and secondary education should be for the 70's; of what is the true professional role of the teacher; of the kinds of learning environments and instructional strategies that would accommodate individual differences and pass the initiative for learning to the child. The result is a curriculum having the following characteristics:

a. A serious effort to deliver on the promise of individualized instruction for all children through a range of learning tools, activities, and organizational and management arrangements. Built into the programs are numerous opportunities for student self-choice, self-direction, self-instruction, and self-evaluation. Teachers using the Hawaii English Program train children to work for the most part independently, in an environment laid out to permit choices from an array of materials and activities, and with arrangements that provide for immediate responses to the decisions that the child makes.

b. An attempt to be precise about instructional objectives and to build evaluation of these objectives into educational materials. These are most apparent in the goals and criterion levels for achievement built into the Language Skills materials, but they are present as well in the Literaure and Language Systems programs.

c. An attempt to systematize the benefits of peer-tutoring for both the student tutors and the student learners. Within each classroom a child who has successfully completed a particular Language Skills component as a learner is given the opportunity to tutor another child in that component.

d. An attempt to emphasize inductive and discovery approaches to learning, on the premise that the extraordinary learning powers of the young are best released and enhanced when they learn from their own attempts.

e. A move toward activity-centered learning in the form of games, simulations, creative drama, improvisations, related art activities, writing, and other "making" activities. These are devised not merely as motivational devices -- the instructional goals are built into the activity.

f. A move away from the single texbook mode toward greater use of non-text modes of educational presentation. Books are still an important part of the curriculum, but the conventional, pervasive reliance on the single book has been replaced by a wider use of multi-modal presentation to accommodate the different learning styles of children.

g. An attempt to stimulate a real appetite and style for innovation and experimentation on the part of students through the encouragement of pluralistic responses to questions raised in the curriculum. Conjecture, speculation, tentative answers, alternatives, open-endedness, even ambiguity, are encouraged.

h. A definite movement to fully professionalize the role of the teacher and reduce the more mechanical and redundant functions he fulfills. The teacher is less the single source of knowledge and direction and more the catalyst, consultant, diagnostician, guide and exemplar, or model, for the student's learning.

i. A shift to effective early education and decreasing reliance on remedial instruction. This shift is reflected in a bottom-heavy curriculum and a parallel cost pyramid which provides a wealth of materials at the primary grade level.

4. Program Goals

The Curriculum Survey of 1965 defined English as "the study and use of the English language." It made a distinction between the subject matter of the language itself and its literature on the one hand, and, on the other hand, the arts and skills of using the language -- speaking, listening, reading, and writing. The survey report noted the following courses subsumed under the program: the required language arts instruction in the elementary schools, the required English and reading courses in grades 7-12, and the elective courses in creative and expository writing, literature, developmental and remedial reading, speech, newswriting, and yearbook.

A more recent document, the English PPB for Fiscal Year 1970, defines English as "the study of literature and language, and the development of the skills of listening, speaking, reading, and writing." These four skill areas and language and literature are identified as the six elements of the English program.

The Hawaii English Program's definition of English is generally compatible with these definitions. However, it does attempt to establish what is English and what is not English more clearly than has been done in the past, and it sharpens the focus for instruction by simplifying the structure and organization of this field of study.

The Hawaii English Program defines English as a program of studies consisting of two major areas, language and literature. It engages students in the study of the English language in three different ways: 1) with the acquisition of proficiency in communication skills; 2) with the study of the nature and structure of the language itself, English in particular and language in general; and 3) with the artistic uses of language in literature drawn from worldwide sources.

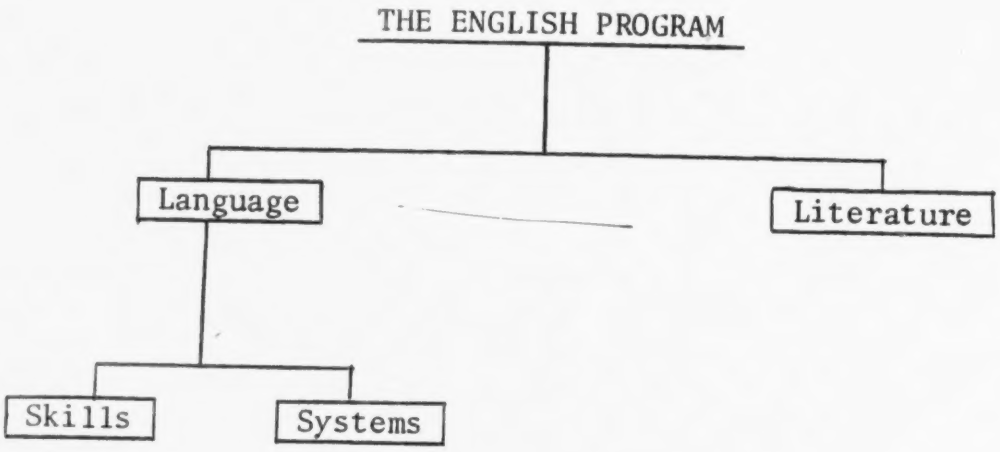
Language, the most fundamental area of study, is concerned with a form of behavior peculiar to the human species. Man is unique because he can make and use symbols. The study of this distinctively human behavior is approached in two broad ways:

a. A Language Skills Program to help the student toward progressively greater synthesized control of his language performance.

b. A Language Systems Program to give the student some insight into the creative nature of language behavior and the grammatical rules such behavior presupposes, and to provide some perspectives on the varieties of and changes in language behavior through time and across cultures and societies.

The second major area of study in the Hawaii English Program is literature, which is an artistic expression in language, oral or written, in which knowledge about man and his condition is placed in new relationships in forms which are being constantly modified to fit each unique expression. The Literature Program aims to help the student enjoy literature and to discover his own responses to individual works, to feel and understand both the sources and the process by which he evolves as a reader and student of literature in and beyond school.

A simple diagrammatic representation of the new curriculum at the program and subprogram levels might appear as follows:



5. A rationale for the General Program of English

The Department of Education's goal statement includes the mandate: "All programs shall derive from a curriculum which must include the areas of knowledge of English, the Sciences, Mathematics, the Social Studies, the Humanities and the Practical Arts." English in the program of general education is justified as follows:

> Essential to effective participation in the affairs of our society is the individual's capacity to think and to communicate. That is, in order to engage in any human discourse and to understand and reshape his culture, the individual must come to acquire and develop the skills and knowledge which will permit him to grasp the significance of new experiences, make causal relationships, draw inferences, and create a new knowledge. Since Language is central to all these processes, instruction in language is the fundamental element of the entire educational process.
>
> In our society, it is through the English language that the individual communicates and it is through the literature of this language that he comes to understand himself, his society and the world around him.

The Project planning teams developed statements of rationale for the subprograms of literature and language but none for the general programs of English. The charge to design a new English curriculum assumed that the development would be within the framework of the State's existing general education program and consistent with the stated goals of the public education.

Development of the new curriculum has been within this general framework and is consistent with the stated goals of public education. Although the planning team did not duplicate a rationale at the general program level, it sought justification for its particular vision of English in three basic needs of all children: 1) the need for competence in producing and receiving language, since these skills are fundamental to thinking, to expressing oneself, to communicating, to learning both in and out of school; 2) the need to know something about the nature and operating principles of language, since language is so intimately a part of the self and of culture; and 3) the need to experience literature, because this is the dimension of language which is concerned with the life and world of feeling and imagination, enabling us to construct possible models of human experience and human behavior.

6. Curriculum Areas Not Included in the English Project Development

Certain courses presently subsumed under the general program category of English were not included in the English Project development, partly because they seemed to fall outside of the Project's definition of English, partly also because their discreteness as "strands" in the curriculum tended to disappear in the new design, but more basically because of the limitations of time, manpower, and resources. Not considered for development or redevelopment were all secondary speech arts courses (Speech Improvement, Speech Fundamentals, Public Speaking, Debate, Radio and TV, Drama); the special elective courses in secondary English (Creative Writing, Expository Writing, Reading Improvement, the Novel, etc.); Honors English and Advanced Placement courses; and the "applied" courses of newswriting and yearbook.

Remedial reading as an independent course also was not considered, again largely because of lack of time and resources, but more importantly because it was felt that remedial reading involves numerous problems of learning not confined to reading alone. Decoding skills are only a small part of a complex problem involving language, experience levels, concept development, interest and motivation, intelligence, cognitive skills, environmental deprivation, emotional maladjustments, appropriate materials -- to mention only the more conspicuous factors. It was felt, moreover, that in individualizing the teaching of reading, the new Language Skills Program would gradually reduce the incidence of crippled readers coming up through the system so that remediation would eventually cease to be a major problem. Faced with the choice of applying scarce resources to already crippled readers on the one hand, or applying them on the other hand to sound programs for beginners, the Skills team chose to emphasize effective early programs. Under the Special Projects provision of Title III, ESEA, two special projects are currently under way to adapt the HEP materials for slow secondary achievers and for mentally retarded educable children. In addition, a part of the Secondary English development will attend to the needs of students lacking skills mastery.

Special mention should be made of composition, traditionally the third member of the English tripod and one of the major program elements in the general education program. Composition is an important activity in the Hawaii English Program, but it loses its identity as a separate and distinct strand of the curriculum after the student has attained a particular level of skill. Early in the Skills program the student learns to write cursive or manuscript and to type. Both handwriting and typewriting are treated as means of purposeful communication. When he has reached a level of legibility and fluency in writing, he begins composing simple task-oriented messages to which his peers respond.

Spelling, punctuation, capitalization, and paragraphing are considered part of the apparatus for communicating responsibly in writing. Following this stage, composition becomes one of the basic modes of inquiry in the Literature and Language Systems programs. In the Literature program the student learns to write creatively in various literary and practical forms: stories, poems, plays, diaries, journals, letters -- creations based on his own experiences or on his reading. He also writes about literature and his responses to it, so that composition, with the precision it demands, becomes a means for the student to explore the sources of his response to literary works. In the Language Systems program the student writes from a more scientific orientation his observations, discoveries, tentative conclusions, and generalizations about the language data he studies. Note-taking, record-keeping, research reports, summaries, and the like are among the technical activities and forms he uses, but he also creates advertising copy, puns, propaganda slogans, original sign systems, and writes in connection with many language games and workbook activities provided in the program. Composition is thus treated not as an end in itself but as a means by which the student can explore his subject and accomplish his purposes.

Similarly, reading as a separate vertical strand in the curriculum disappears in the new design. The Language Skills program makes a clear distinction between *decoding* skills (learning speech-print correspondences at letter, word, phrase, and sentence levels); *comprehension* (which involves decoding but also many other factors not exclusively concerned with reading, such as intellectual skills, language and concept levels, vocabulary, maturity and experience, etc.); and the *use* of reading as an instrumental skill in the many uses to which reading may be put. The initial reading program, which emphasizes mastery of the decoding skills of discrimination and recognition, is designed to make the student's access to the written system as automatic as possible. Having done this as early as the student chooses, the program moves him into using his decoding skills in a variety of interesting and purposeful activities. He talks, writes, and types about what he reads. Once he has demonstrated sixth-grade proficiency in reading (and this may be reached in four years for some pupils), reading instruction *per se* disappears. Instead the student reads and discusses stories, poems, plays, and non-fiction which are put together in artful ways to bring out subject concerns. He reads research articles and trade books on language and communication systems as he investigates language problems of interest to him. In his reading of literature and language materials, he is taught the *techniques of understanding the subject* he is reading about. Thus reading is not the end of instruction but rather one *means* of gaining knowledge which is inseparable from the knowledge the student is seeking.

7. General Curriculum Framework for the Hawaii English Program

Certain basic curricular assumptions and action guidelines laid down for the Project staff governed the development of the program. Most fundamental were the theories of curriculum practice advanced by such theorists as King and Brownell, Bruner, Schwab, and Phenix. Research in language and linguistics, cognition, learning theory, and in the elusive area of response to literature also influenced the design. Most important were the works of Chomsky, Piaget, Lenneberg, Ausubel, Skinner, and Purves. Numerous position papers on a curriculum theory and design for English developed from discussions based on these sources. These are available for study in the Project office.

The structuring principle for organizing the curriculum is the concept of the pupil as a novice learner, an inquirer, (and the teacher a more advanced student) within a larger community of people who practice a particular style of gaining and organizing knowledge in an area of study. The curriculum in language and literature is conceived as "a planned series of encounters" between the student and the disciplines at the most promising points of contact with key ideas, and in ways that provide a challenging entry for the young into the study. The curriculum attempts to present the disciplines of language and literature authentically and as a whole -- their information, art, and practices -- but the traditional trap of polarization between discipline-centeredness and child-centeredness has been avoided in a genuine search for challenging ways to invite children into inquiry.

Secondly, the curriculum is arranged as a continuum, an upward-moving series of goals and encounters which are neither grade - nor age-bound, nor tracked for fast, average, and slow. The various courses of the curriculum can be made to fit the conventional graded organization, and accommodation to different patterns of school organization. In short, the curriculum can be as flexible as the school wishes it to be.

Ideally, each student will progress up this stream of study according to his ability, rate, interest, and capacity for independent study. Ideally also such artificial barriers as grading, restrictive grouping practices and promotional policies, and ceilings on books and materials would be removed. This implies the greatest possible degree of individualization and opportunities for independent work built into the curriculum. The Hawaii English Program has achieved this to a remarkable degree, especially in the Language Skills program.

Finally, the curriculum is planned for all students of all ability levels, including even handicapped children whose capacity for learning is not impaired to the point where achievement through normal channels is precluded. The Project teams felt strongly that all students, regardless of ability, are entitled to experiences of search and discovery in the study of language and literature, and they have tried to ensure these experiences through materials that cover a wide range of interest, sophistication levels, and learning modes.

B. Allocation Of Time To English

The basic philosophy of individualization and independent study that underlies the Hawaii English Program design calls for a school organization and schedule that not only meet the prerequisites for the field of study but also suit the level of performance of each student. The school day, for example, should allow double or triple the scheduled time for reading for the student who needs help in reading; it should eliminate reading instruction altogether for any student who does not need it. However, since any determination of time allocations for English departing from present policies is a decision outside the jurisdiction of the English Project planners, the program design was developed approximately within the present framework of 600 minutes weekly for language arts instruction in grades 1-6 and 275 minutes weekly in grades 7-12. The time segments for instructional units from the larger divisions of semester courses to the smallest unit of daily lessons kept approximately to the current allocations. Care was taken, however, to allow for the greatest possible flexibility in the design so that it could accommodate a number of different organizations and schedules. The planning of instruction in modules was one way of achieving flexibility. The generally non-sequential nature of the modules was another (although sequence is provided where it is essential, as in the intermediate Language Systems program, and sequence in a sense other than the customary is built into all the programs). With judicious faculty planning, it should be possible to fit the Hawaii English Program into any school scheduling pattern, even the most sophisticated.

Several major changes in time allocations and course content for elementary English are being proposed at this time. These are tentative proposals which would have to be reconciled with implementation of the Department's recently adopted Foundation Program, but if carried out the changes will better meet both the requirements of the individual student and the requisites for English language study. The changes appear possible within the present curriculum policy providing for 50 per cent of instructional time in the elementary years to be devoted to language arts instruction. The proposals are as follows:

1. That for the K-2 continuum, additional time up to 60 minutes daily be provided for language arts instruction.

2. That the specific allocation of 60 minutes daily for reading instruction in grades 1-6 be erased.

3. That literature be recognized as a formal part of the content of the elementary curriculum (K-6) and time allocated for it accordingly.

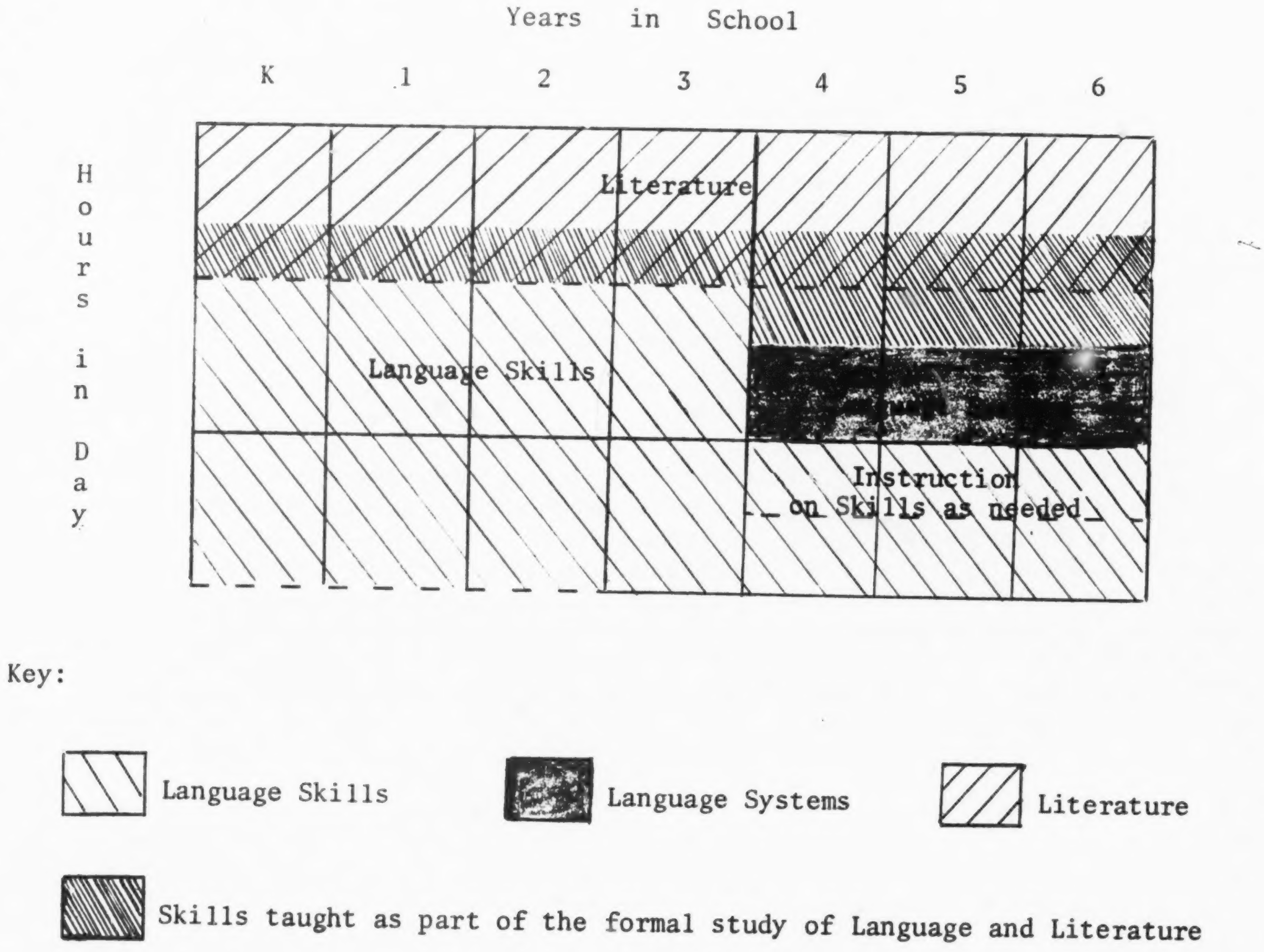
4. That beginning in grade 4 Language Systems be recognized as the formal Language content of the elementary curriculum.

5. That from grades 4-6 the elementary schedule continued to allow adequate time for skills instruction.

These changes would result in a daily allocation of up to 3 hours for English for the first four years of school. Since this is essentially a time for establishing the basic skills of literacy, 2 hours might be spent in individually determined skills instruction and up to an hour in literature. In grades 4-6 the content areas of language and literature become prominent, especially as individual children approach the completion of the Skills program.

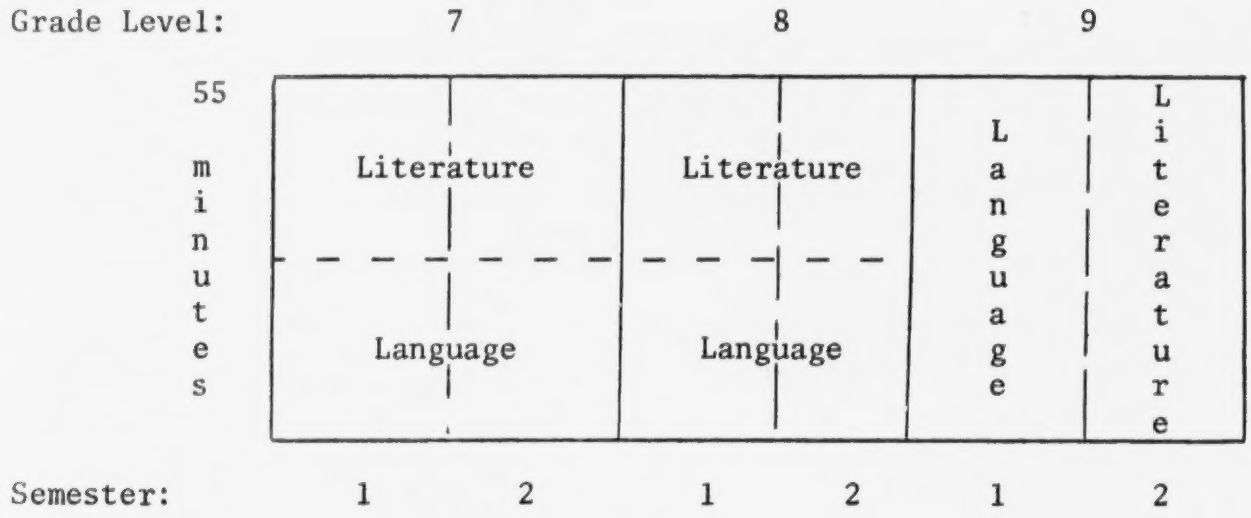
These proposed changes stem from a curriculum stance that formal skills instruction per se should gradually be phased out as the student reaches a stage of relative independence in learning. This stage has been determined arbitrarily as grade 6 levels of achievement, after which skills instruction is subsumed under the content areas of Language and Literature. Discussing, reading, and composing become major modes of inquiry within the substantive studies and not ends in themselves.

The following chart portrays the proposed time allocations for elementary English.



The proposed allocations of time for the secondary part of the curriculum is presented here to provide a total view of the schedule. In the intermediate program the current English time of 55 minutes daily is divided approximately into half for language and half for literature- but any precise determination of the actual division of time is left to each faculty and the individual teacher. The literature study units, like the elementary units, are nonsequential -- they can be taught in any order. On the other hand, the study units of the intermediate Language Systems program, unlike the elementary program, call for sequential presentation -- each unit builds logically on what has preceded it. This is particularly true of the 9th grade units. The proposed allocation of time for grades 7, 8, and 9 therefore reflects the most ideal arrangement for the Language Systems program. In grades 7 and 8 the Language units can be taught in blocks of days, weeks, quarters or semesters. The grade 9 units, however, should be taught consecutively, and for this reason the semester division is ideal: one semester for Language Systems and one semester for Literature.

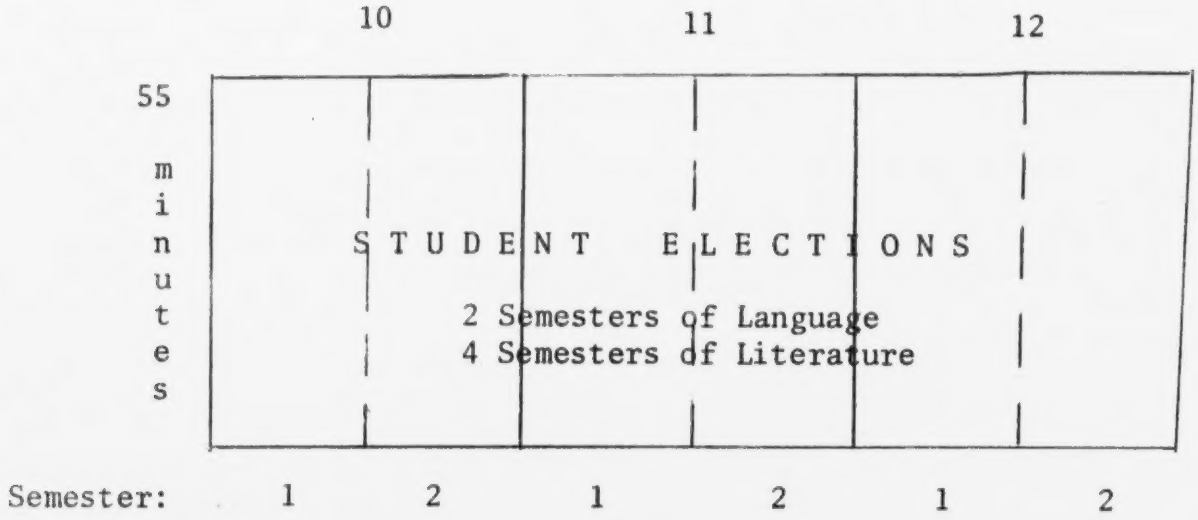
The following chart illustrates this division:



The senior high program was designed to offer the greatest possible degree of elective choices for the student within the current time requirement of six semesters of English in grades 10-12. The courses in both Language and Literature are self-contained semester courses emphasizing interdisciplinary concerns with no sequence inherent in them, and it should be possible to offer them on an ungraded basis, with students free to elect them in any order during their three years of high school. Two semesters of Language and four of Literature are proposed as basic requirements for English.

The chart below illustrates the tentative proposal for the school schedule:

Grade level:



C. Needs Assessment Preceding The Hawaii English Project

The decision to put funds from Title III of the Elementary and Secondary Education Act into the Hawaii English Project was made by the State Board of Education only after a survey of educational needs within the State had been conducted. During the years prior to 1966, when money was first appropriated to the State for innovative and exemplary projects, there had been a great variety of studies and surveys subsumable under the rubric of "needs assessments." The overwhelming consensus emerging from these studies was that the most critical educational need throughout the State of Hawaii was to upgrade the language arts curriculum.

Information sources included the following:

1. Resolutions of annual PTA conventions
2. Recommendations from School Advisory Councils in the seven districts
3. Resolutions of annual conventions of the Hawaii Education Association
4. "Project Speak Up" (1965), a sampling of "grass roots" expectations of the schools collected in 131 neighborhood discussion groups with laymen
5. Findings of conferences of State and District staff and school administrators
6. Program budgeting documents submitted by individual schools for incorporation into District budgets and plans

7. Critical review, revision, and rewriting of curriculum and program guides by teams of schools and university personnel

8. Fact-finding studies initiated by the State Legislature

9. Collective and/or individual criticisms and recommendations by university consultants in particular subject-matter fields

10. Institutional research documents of the Department of Education

11. Studies performed by local and out-of-state consulting firms

12. Individual communications to members of the Board of Education or the Department of Education

13. A feasibility study for a regional educational laboratory in the Pacific Basin (1966)

14. Investigations conducted by the Superintendent's master planning team in preparation for the publication of the Master Plan for Public Education in Hawaii (published 1969)

15. Program, Planning, and Budgeting System (PPBS) documents for certain areas of the curriculum

16. The statewide minimum testing program

17. A comprehensive library planning study for the Hawaii State Library System (1968)

18. The Curriculum Survey of 1965

Of these studies, the most comprehensive and systematic was the Curriculum Survey of 1965. The Curriculum Survey Reports (1966) summarize the findings of the study. They describe in some detail public school programs in English (language arts), mathematics, science, social studies, speech, business education, agriculture, home economics, and industrial arts. The nine survey reports answer the three questions put to the Hawaii Department of Education by the Board of Education: What is being taught in our schools and for what purpose? How adequate is instruction? Are there equal opportunities for all children in the State wherever they live?

With assistance from the University of Hawaii, educational districts, and school principals and teachers, school survey teams evaluated a random selection of twenty-one schools (10 per cent of all public schools in the State) on program objectives, their relevance to the subject area, and their consistency with State aims. The survey teams visited numerous classrooms. They studied school-developed guides, lesson plans, teacher-made tests, instructional materials. They examined teacher and pupils personnel data, standardized test scores, accreditation reports, and school budget reports. They interviewed administrators, department and grade-level chairmen, teachers, and other staff members. They talked with students.

What emerged from these surveys was a fairly comprehensive and reasonably accurate picture of what was going on in the public schools in these nine areas of the curriculum. As a direct result of the English survey report, the Board of Education and the Department of Education made the decision to focus development efforts on the state's curriculum and instruction in English and to give the language arts project top priority in the expenditure of Title III funds in Hawaii.

D. Field And Pilot Testing

The initial testing of new instructional components and procedures, before revisions were made, began in September, 1967, in five schools (one on Oahu and four on Molokai). These five schools, designated as Field schools, began with kindergarten student participation in 1967, adding one grade level each succeeding year. In September, 1969, seven additional Pilot schools (one in each school district) and the University of Hawaii laboratory school began testing whole instructional packages containing revised components on kindergarten and first grade children. The testing in Pilot schools involved use of the revised program prior to final revisions and before introduction in the regular installation classrooms throughout the State. A summary description of the Field and Pilot schools is contained in Appendix 1.

The 1970-71 school year saw the final versions of the Hawaii English Language Skills and Band I Literature subprograms introduced to grades K and 1 children in at least one classroom in every school in the State. These first-year schools were called Installation schools. (Additional information on the total number of students involved with HEP was described earlier).

At the end of the 1970-71 school year, then, a large number of grades K and 1 students throughout the State, and a lesser number of grades 2 and 3 students, participated in the new English program.

E. Major Activities During 1970-71

The major development and testing of instructional components and procedures were conducted during the first four years of the Project. The tasks involved included the following: (a) developing and/or revising curriculum materials; (b) training teachers and supervisory personnel through formal summer institutes, on-site demonstrations, and classroom consultations; (c) preparing specifications for the production of materials and equipment for the installation packages; (d) producing prototype instructional materials; (e) preparing for the new installations, and developing and publishing teacher guides; (f) developing teacher training guides; (g) planning with the University of Hawaii's College of Education for pre-service and in-service teacher's education; (h) supervising the bidding for commercial production of the materials and coordinating the production; (i) consulting with the State Department of Education's office of Instructional Services on curriculum issues; (j) evaluating classroom trials of the materials of new materials, student performances, and the perceptions of students, teachers, and school administrators;

and (k) disseminating information about the program through school visitations, brochures, news articles, displays, and television presentations.

During the final year (1970-71), the project employed over sixty-five professional staff members, including University and Department of Education specialists and master teachers in the field of education. The total staff also included support specialists in evaluation, media technology, production, and business administration, plus the classified clerical staff. Fifteen student artists were also hired to assist in the development/production phase of the program. In addition, numerous student helpers were employed to assist with the clerical tasks in the development of the program.

The work of the staff during 1970-71 involved the finalizing of the development and production phases of the program, as described above. However, the major emphases during the year related to the completion of the grades 4-6 components in the Language Skills, Literature, and Language Systems subprograms. The work involved was similar to those described in the foregoing. Additionally, however, staff members, particularly in the Skills and Literature subprograms, were actively involved in the monitoring of the HEP installation in schools. Project-end reports and the development of procedures to transfer further installation of the HEP to the Department's General Education Branch also were major tasks completed during the year.

The evaluation activities conducted during the year will be discussed in more detail elsewhere in this report, under each subprogram.

Overview of Hawaii English Program K-12

LANGUAGE

Language Skills

Individualized Programs in Communication Skills: Non-graded, largely non-text, self-instructional or peer-taught packages of materials to enable the pupils to reach grade 6 achievement levels in the shortest time possible. Skills beyond these levels are taught as part of the content areas of Language Systems and Literature.

SKILLS WITH ORAL SYMBOLS
Listening and Speaking

- Phonology
  - Sounds of English
  - Intonation
  - Stress
- Vocabulary
  - Colors & Shapes
  - Prepositions
  - Affixes
  - Multiple Meanings
- Grammar
  - Plurals
  - Determiners
  - Grammar 1 & 2
    - Verbs
    - Pronouns
    - Questions
    - Negatives
    - Possessives
    - Phrases
    - Word Differences
  - Grammatical Flexibility

Language Systems

ELEMENTARY PROGRAM 4-6
Perspectives in Communication: Fifteen self-contained, non-graded, non-sequential 3 week study units on aspects of human and animal communication systems for use in grades 4-6:

ADVERTISING

ANIMAL COMMUNICATION

BACKGROUND OF ENGLISH

DIALECTS

GESTURES

INTERNATIONAL LANGUAGES

NAMES

POPULAR SONGS

PROPAGANDA

SECRET CODES

SIGN LANGUAGES

SOCIAL USES OF LANGUAGES

SOUNDS

SYMBOL SYSTEMS

WRITING SYSTEMS

LITERATURE

Three bands of programs from K-6, each containing 6 elements, or large groupings of overlapping units: MAKE BELIEVE, THE WORLD AROUND US, GROWING UP, THE SOCIAL ORDER, ADVENTURE, PERCEPTION AND LANGUAGE. Each element contains 2-4 components, or study units, lasting 2-3 weeks each.

Band I (K-1)
Make Believe: Magic & Wonder, Fabulous Creature
The World Around Us: Rhythms of Nature, Rhythms of Art, Rhythms of Man
Growing Up: Imagining Things, Self & Family
The Social Order: Animal People, Heroes & Leaders
Adventure: Narrow Escapes
Perception & Language: Rhythms & Patterns, Images

Band II (3-4)
Make Believe: Magic & Wonder, Fabulous Creatures, Little People. Wishful Thinking
The World Around Us: Rhythms of Nature Rhythms of Art, Rhythms of Man
Growing Up: Imagining Things, Self & Family, Insights
The Social Order: Animal People, Heroes & Leaders
Adventure: Narrow Escapes
Perception and Language: Denotation and Connotation, Rhythms & Patterns, Images

Overview of Hawaii English Program K-12 (continued)

LANGUAGE

Language Skills

Language Variations
- Dialect Variations
- Style Variations

Task Oriented Communication

Task Oriented Group Discussion

Meaningful Communication

Songs

SKILLS WITH GRAPHIC SYMBOLS
Reading

Graphic Symbols Discrimination
- Letters
- Words

Graphic Symbols Recognition
- Letters
- Numbers
- Words
- Phrases & Sentences
- Audio Card Books
- BRS Satellite Kit

Purposeful Reading
- Instructional Library
- Dialect Books
- Speeded Reading
- SRA IIA Kit
- Audience Reading
- Coordinated Language Skills
- Reference Skills

Taped Books

Language Systems

INTERMEDIATE PROGRAM 7-9 (Tentative)
Perspectives in Language
Sequential 4-week Study Units

7th Grade	8th Grade	9th Grade
Language Families Historical Development & Vocabulary Phonology Semantics	Words Syntax Transformations Pidgin	Creativity Abstractness Children's Language Exotic & Artificial Languages

SENIOR HIGH PROGRAM 10-12 (Tentative)
Prospectives in Language Culture
Non-Sequential Elective Semester Units

- Language and Anthropology
- Language and Literature
- Language and Mathematics
- Language and Philosophy
- Language and Psychology
- Language and Sociology

LITERATURE

Band III (5-6)

- Make Believe: Magic & Wonder, Little People, Bigger than Life
- The World Around Us: Rhythms of Nature, Rhythms of Art, Rhythms of Man
- Growing Up: Imagining Things, Insights Self & Others
- The Social Order: Heroic Deeds, Acquiring Wisdom
- Adventure: Searches, Encounters
- Perception & Language: Denotation and Connotation, Images, Rhythms & Patterns

LITERATURE LISTENING PROGRAM

INTERMEDIATE PROGRAM 7-9 (Tentative)
Non-Sequential 3-6 Week Units
Grouped Under These Elements:

Band IV
- THE ORAL TRADITION
- THE LEGENDARY HERO
- THE AUTHOR IN HIS NATURAL WORLD
- EXPLORING THE RIDICULOUS
- EXPERIENCING THE WORLD OF POETRY
- SELF
- PATTERNING OF FICTIVE AND LANGUAGE ELEMENTS
- PERCEPTION & LANGUAGE

SENIOR HIGH PROGRAM 10-12 (Tentative)
Non-Sequential Elective Semester Units

Band V
- Reading and Writing Literature
  - Converting the World to Language
  - Forms of Experience
  - Perspective & Voice
  - Convention & Revolt

Overview of Hawaii English Program K-12 (continued)

LANGUAGE

- Language Skills
- Language Systems

LITERATURE

Writing
- Handwriting
  - Letter discrimination
  - Letter Recognition
  - Cursive Writing
  - Manuscript Writing

Purposeful Writing

Spelling

Capitalization

Punctuation

Typewriting
- Typing Skills
- Applied Typing

Literature and the Outside World
- Literature and Psychology
- Literature and Culture
- Literature and Science as Metaphors of Experience
- Private and Public Arts
- The Writer and Critic of Society
- Literature and Politics
- Literature and Revolution

III. THE LANGUAGE SKILLS PROGRAM

III. THE LANGUAGE SKILLS SUBPROGRAM

A. Assumptions and Goals of the Language Skills Program

The acquisition of language skills is stressed in the early years of schooling because effective interaction with others and effective learning in school both depend on proficiency in these skills. In contrast to the Language Systems Program, in which knowledge about language is primary, the Skills Program is a performance curriculum, in which the fundamental goal is synthesized language control, the combined mastery of listening, speaking, reading, and writing skills for the purpose of communicating and learning, both in and out of school.

Several important assumptions underlie the development of the Skills Program. First is that language is for use in communication, and therefore any program of skills should be developed and evaluated within the context of purposeful communication. The program assumes that if the long-range purpose of a school program is the laying of groundwork for ability in effective communication, then the immediate purpose for the child should be to succeed in a communication task at his appropriate level -- a task more complex than one he has mastered before but less demanding than one he will master next. The entire program has been designed as a series of such tasks leading to the accomplishment of higher level goals for each child. Experiences in interaction aimed at achieving goals in communication are made available at a wide range of levels, but no child is required to enter any skills program unless he both needs it and can succeed in effecting the communication required.

Secondly, the Skills Program recognizes that children differ in interest, in styles of learning, in aptitude and rate, in thresholds for boredom, in educational needs, in need for indications of success, and in need to participate in decisions affecting their own activities. These differences imply that the route a child takes to skills development, the specific content of programs, the manner of presentation, and the speed of his progress must match as nearly as possible his specific needs, abilities, and interests. The Skills Program is essentially a bank of materials designed for individualized programs that will help children proceed from their individual entry levels to sixth grade ability levels in language skills.

Thirdly, the program assumes that in an educationally useful responsive environment, the child is a decision maker. Next, someone or something in his immediate environment responds to his decisions. Such an environment may consist of a child working individually with paper and a pencil, with a book, with a phonograph, with a listening headset, with a recorder and playback instrument of the reel or card type, with a film loop, and so on. On other occasions, the responsive environment may include a child and a teacher working an a program. More often it may include two students, one teaching and the other learning from his peer or near-peer. The responsive environment changes as the child's needs change. This concept of the learning environment as a series of changing environments with which the child is constantly interacting implies a departure from the classroom in the conventional sense. It calls for a specifically organized learning environment which simultaneously requires and provides for the child to make decisions as he progresses towards his goals.

A fourth assumption is that the teacher's role in such an environment changes. Observation, evaluation, guiding and planning become more important for the teacher than lecturing, cueing, testing, correcting, and clerking. In the Skills Program, the essential tools are available to allow the teacher to cope effectively with the individual requirements of every child and thus fulfill her true professional role.

A final assumption involves the concept of systems. The entire Language Skills Program constitutes a system in which there is a constant and dynamic interplay among the elements that make up the system: goals drawn from communication systems; outcomes described as successful behaviors in communication; pupils and teachers who play particular roles; a full bank of materials which serve as a series of cues, tests, and as goals; and a learning environment organized in a particular way. Participants in the system are those pupils who have available both the full bank of materials and the specified learning environment, which includes a qualified teacher and an ungraded group of students in which one-third has always had at least two years of experience in the system, one-third has had at least one year of such experience, and no more than one-third is totally new to the system and the materials. If the integrity of the system is maintained, it is expected that certain outcomes can be predicted with a high degree of accuracy.

The overall goal of the Skills Program is to help each child progress from his entry level in each subprogram to the stage of independent learning in the language arts. This stage has been identified as what is generally acknowledged as sixth grade achievement levels. Some children will reach aspects of this stage in three years or less; others may take the current average of seven years or more. The planning team feels confident that the majority (not just half) will attain this level well before five years and that the number of students who do not currently attain these levels within seven years will be substantially reduced.

Specific goals for the Skills Program have been established within and across two basic areas: listening and reading skills contributing to a peceptive repertory, and oral and writing skills leading to a productive repertory. The subprograms to accomplish these objectives are seen organizationally as separated strands, but in operation they are not. They are interrelated parts of a total system that will take the child toward the synthesized control which is the primary aim. Specific students goals are established and criteria set for determining when such goals have been attained. Student objectives are organized toward the goal and precise criteria are established for the attainment of the objectives so that the student will know if he is on target for the goal. For example, the child learning to write cursive small letters from film loops knows that his goal is to copy from models all 26 small letters of the alphabet sequenced in any order. He knows that he has reached his target when he can correctly copy in his practice book a series of letters in any order from models provided by his teacher.

B. General Approach

Parallel with the goals in language are some important aspects of approach. The most distinctive feature is the provision for differentiated learning and for freeing the child to assume greater responsibility for his own learning. The materials design and the roles defined for teacher and pupil encourage independent learning, the exercise of intelligent choice of program routes, the student's tracking of his own progress.

Another important aspect of approach is the use of peer tutoring. The child participates actively in communication in the form of teaching others something that he has mastered. A sense of responsibility, purpose, and self-fulfillment are important outcomes of teaching others, but more important from a learning standpoint is the gain that accrues to the child who teaches. Helping another learn is a chance to review, but it is to review in a game-like situation and with an adult-type purpose to enhance the activity. It is also a delayed test of the tutor's learning. Evidence* already accumulated in the English Project shows far superior gains on the part of children who teach than of comparable children who do not teach. There is, further, convincing evidence to indicate that children learn effectively from their peers, in some instances much more readily and under less threatening circumstances than in learning from adults only. Thus in the teaching-learning groups of two or three that are used in the Skills Program, there are great potential benefits for each child as he fulfills the role of learner and again as he may fulfill the role of tutor.

Seen as a system, the entire Skills Program is a network of interconnected subsystems with different entry and exit points for different children. Each of the four subsystems (Aural, Oral, Reading, Writing) has its own network and flow chart, but it has interconnections with the other three subsystems as well. For example, a child failing in letter recognition in the early stages of learning to read has the option of moving to a second mode within the Reading subsystem or of shifting to the Typewriting program. He may learn to recognize letters on the typewriter keyboard. A child unable to handle numerals in a task-oriented communication activity in the Aural-Oral program may be looped back into the Numeral Recognition component of the Reading program. In short, there are various paths of progression available to desired goals according to each child's needs, abilities, and interests.

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* Refer to Hawaii English Project Annual Evaluation Report, 1969-70.

C. Materials of the Curriculum

The program objectives are reached by the student through a variety of modes. A mode is an audio, visual, and/or tactile device for use as a technique for attainment of a learning objective. The chief modes are:

Stack mode:	A series of cards attached by means of a rod to a base. The learning materials are programmed into the stack in a way to permit two or more children to work together. (Primarily visual)
Audio Card Reader mode:	An audio card-reading device which records and/or plays back sound. (Primarily audio but also visual)
Film mode:	A continuous-loop motion picture in a cartridge, with or without a sound track.
Book mode:	(Visual)
Typewriter mode:	(Primarily visual, also tactile)
Paper and/or pencil mode:	(Primarily visual)
Flocked card mode:	A card with letters or numerals in raised or textured material. (Primarily tactile, visual)
Tape recorder mode:	A tape recorder adapted for use with cassettes. (Audio).
Phonograph and disc mode:	(Audio)
Game mode:	Varied devices, such as lotto or playing cards, to carry out a task-oriented or self-evaluative activity.

Most of the materials of the curriculum are conveniently packaged in individual containers that make for ease of handling and storage. There are a great many items in the total Skills package, but the problem of management for the teacher is reduced considerably by students' assuming responsibility for proper storage after use.

A detailed instructional manual for the teacher accompanies the program. The manual contains explanations of 1) conceptual framework, 2) learning environment, 3) the various subprograms, 4) learner goals for each element, 5) entry and exit behaviors, 6) learning procedures, 7) next steps, 8) record keeping.

D. Organization of the Language Skills Curriculum

The materials of the curriculum are grouped into two skills areas: skills with the oral symbols of language and skills with the graphic symbols symbols. These areas are further sub-divided into receptive and productive aspects. The receptive aspect of skills with the oral symbols of language includes comprehension; the productive aspect includes expressive speech, song, and communication. The receptive aspect of skills with the graphic symbols of language includes reading; the productive aspect includes handwriting and typewriting with communicative purposes. These areas are related, and the subdivisions exist primarily for practical organizational purposes.

A graphic outline of the Skills Program follows.

DESIGN OF LANGUAGE SKILLS SYSTEM
(Revised August, 1971)
K-6

SKILLS WITH ORAL SYMBOLS

Listening and Speaking

Phonology
- Sounds of English
- Intonation
- Stress

Vocabulary
- Colors & Shapes
- Prepositions
- Affixes
- Multiple Meanings

Grammar
- Plurals
- Determiners
- Grammar 1 & 2
  - Verbs
  - Pronouns
  - Questions
  - Negatives
  - Possessives
  - Phrases
  - Word Differences
- Grammatical Flexibility

Language Variations
- Dialect Variations
- Style Variations

Task Oriented Communication

Task Oriented Group Discussion

Meaningful Communication

Songs

SKILLS WITH GRAPHIC SYMBOLS

Reading

Graphic Symbols Discrimination
- Letters
- Words

Graphic Symbols Recognition
- Letters
- Numbers
- Words
- Phrases & Sentences
- Audio Card Books
- BRS Satellite Kit

Purposeful Reading
- Instructional Library
- Dialect Books
- Speeded Reading
- SRA IIA Kit
- Audience Reading
- Coordinated Language Skills
- Reference Skills

Taped Books

Writing

Handwriting
- Letter Discrimination
- Letter Recognition
- Cursive Writing
- Manuscript Writing

Purposeful Writing

Spelling

Capitalization

Punctuation

Typewriting
- Typing Skills
- Applied Typing

E. Evaluation Design

The 1970-71 evaluation of the Skills subprogram was set in motion with the development of a suggested design by the Hawaii English Project evaluation staff in June, 1970. The proposed design was then submitted to three research agencies, requesting that bids be submitted to conduct an educational audit on the evaluation of the Hawaii English Program. The Northwest Regional Educational Laboratory (NWREL) was finally chosen to conduct the educational audit.

After the awarding of the educational audit contract, meetings were held by the evaluation staff with project planners and a representative from the NWREL to revise the evaluation design. The outcome of these discussions was an evaluation design centering on the following five areas:

1. the extent to which the operation and curriculum of the project are consistent with its design statement;
2. the extent to which the Hawaii English Projects' Language Skills grades K-3 package is achieving its operational and curricular objectives;
3. the extent to which the installation of the Hawaii English Project's Language Skills grades K-3 package is meeting its goals and schedules;
4. a comparison of student outcomes from use of the Hawaii English language skills with student outcomes from other language skills programs; and
5. an assessment of the attitudes of students, teachers, parents, and school administrators toward the Hawaii English Project's Language Skills grades K-3 package.

1. General Evaluation Factors

The Hawaii English Project is an extensive endeavor that contemplates major revisions in the teaching of language. Its three major components are:

a. Language Skills
b. Language Systems
c. Literature

When fully developed, tested and installed, the project will affect the methods of instruction and form, as well as depth, of student participation. All three components are designed to be independent and yet interdependent. They are independent in the sense that the presence and use of one component does not require the presence and use of the others. They are interdependent in the sense that when all three are present and used, a "multiplier effect" is anticipated. For instance, the successful use of the language skills units will enhance student achievement in the language systems approach. Similarly, successful use of the language skills and language systems will enhance student achievement in the literature approach. Similar illustrations could be drawn for the various permutations of the three major components. Final judgments about the effectiveness of HEP should await the development, testing and installation of the total project.

The element of independence among the major components makes it reasonable to evaluate each component separately. Nevertheless, because of the conditions noted above, such evaluation results must be regarded as tentative since they cannot reflect the reinforcements inherent through the "multiplier effect."

In its basic design, the HEP will affect instructional content and process from kindergarten through senior high school. This results in a "cumulative impact" on each student. Final assessment of the HEP ideally should await a group of students who have experienced the total impact from instruction in classrooms where instructional personnel utilize HEP materials and processes.

In light of the need for interim decisions about funding and operations, it is reasonable to gather and organize evaluation data about the Language Skills and Literature Band I components. Further, in light of the significance of the interim decisions to be made, it is appropriate to use an external audit of the evaluation data. Both evaluation and audit will take note of the conditions that neither the "multiplier reinforcement" nor the "cumulative impact" is as yet present and operative. As both of these factors are significant in the total HEP plan, it can be conjectured that findings of the evaluation and audit show "poorer" results for the language skills unit than would be found if the total HEP materials and procedures were fully used.

2. Specific Evaluation Conditions

Interactive learning processes are a highly personalized set of phenomena. As a result, the observation of these learning processes may have the effect of distorting both the evaluation and the learning process. Care has been exercised in the evaluation design to minimize such effects.

The iterative process used in the field-based development of the multi-year HEP programs guarantees that first grade students in the school year 1970-71 will experience different materials and procedures than first grade students of 1969-70. That is to say, materials and procedures used in 1970-71 are improved over 1969-70. Additionally, teachers who used the materials and procedures 1969-70 will be more familiar with the intent and methods of the programs and, therefore, more effective in their use. These conditions are identified as variables to be accounted for in both collecting data and interpreting the results. It should be specifically noted that because of the current first year installation effort, most teachers in Installation schools were using the materials for the first time and some of these teachers may have missed the summer preparation workshop.

3. Overall Evaluation Guide

Several principles were utilized as guidelines throughout the creation of the evaluation design, the evaluation instrumentation, the data collection methodology, and the timing of the evaluation effort.

These were:

a. The HEP materials are being used in a real social environment. The schools cannot be stopped nor their actions directed to conform solely and completely to experimental control of all non-HEP variables.

b. If the processes of evaluation control or distort the uses of HEP materials or if the processes of evaluation distort the interaction of the school and its environment, then the result of the evaluation tends to be spurious. The evaluation then measures the effect of evaluating the HEP material and that is confounded with the effect of the HEP materials.

c. The evaluation, to be effective, must provide information in a manner and at a time that is usable to educational decision-makers. When the above principles or guides are applied, contradictory factors may appear to influence the evaluation design. That is to say, in order to provide information that is usable and timely for educational decision-makers, there may be some "distortion" of the HEP program or of the school operation. Therefore, the guidelines are points about which "trade offs" were made in the evaluation of HEP materials and processes.

4. The Evaluation Design

In planning the evaluation effort, an attempt was made to implement an "experimental design," as defined on page 178 of The Handbook of Research on Teaching, edited by N.L. Gage. In essence, the design used: (1) the student as his own control by applying a pre/post measure approach; the real concern was for measurement of a change in student behavior, and (2) the change in the experimental groups (Field, Pilot and Installation) as contrasted to the changes in a control group (non-HEP).

The use of self-control through pre/post measures and the contrasting of change in experimental (HEP) groups to changes in non-experimental (non-HEP) groups was to assist in determining changes in the experimental groups (Field, Pilot and Installation) that were attributable to the experimental treatment (HEP) and not attributable to changes in the social environment of the school. In fact, three experimental groups were included in the design: Field, Pilot, Installation and one control group. Field schools were in the third year of using the HEP materials.* Pilot schools were in the second year of using the HEP materials. Installation schools were in the first year of using the HEP materials. Control groups have not used HEP materials.

The difference in these three experimental groupings and the control groups was the amount of experience both teachers and students had with the HEP materials. A comparison among Field, Pilot and Installation schools should allow a tentative assessment of the

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* Although field-testing of materials began in 1967-68, the HEP program as it is generally developed today was not utilized until 1968-69.

"cumulative impact" effect mentioned preceeding the General Evaluation Factors section. Observation of classrooms during the November visit (see audit plans) in all three types of experimental groups, as well as discussions with classroom teachers, installation teachers, building principals and district coordinators, have confirmed that the "cumulative impact" effect did occur and had a real effect on both students and teachers.

5. Instrumentation of the Design

As described earlier, there are four major strands in the grades K-6 Language Skills subprogram: reading, writing, listening, and speaking. In addition, the Skills subprogram offers a learning environment which permits the child to assume a greater responsibility for his own learning. Steps, therefore, were outlined to assess, as effectively as possible, the degree of pupil self-direction that was prevalent in the sample classrooms, as well as achievement in the four skills areas.

Two other areas were of special concern for the evaluation. These related to the motivational and attitudinal reactions of children using the new English program, and the attitudinal responses of student, parents, teachers, and school administrators to HEP. Procedures were also developed to assess these two areas in the evaluation design.

Finally, because the Hawaii English Program was a new curricular activity that was introduced in classrooms throughout the State for the first time, assessment devices were developed to measure the degree of adherence that was taking place with the implementation of the new program, and the role played by on-site resource personnel (Installation teachers) in this statewide installation.

The data collecting instruments described below were selected in consultation with project planners, DOE evaluation specialists, and the representative from the Northwest Regional Educational Laboratory. Reliability and validity data of the instruments used for the study are described in Appendix 2.

a. Reading

1) Reading Diagnostic Stack

   a) HEP-developed instrument used as a device to diagnose initial and terminal reading levels

   b) Administered to all sample grades K and 1 pupils

   c) Pre-/post-test

2) Gates-MacGinitie Reading Tests

   a) Nationally standardized reading tests to assess reading vocabulary and comprehension

   b) Administered to all sample grades 2 and 3 children

   c) Pre-/post-test

3) Classroom Books Read

   a) HEP-developed forms to survey the amount of books, used as part of the reading program, read during the school year

   b) Involved all sample grades K-3 pupils

   c) Post-test only

b. Writing

   1) Handwriting Exercise

      a) HEP-developed test to assess handwriting ability in cursive script, manuscript, and spelling

      b) Administered to all sample grades 1-3 students

      c) Pre-/post-test

c. Listening

   1) Taped Listening Exercise

      a) HEP-developed taped exercise to assess listening skills, particularly in following directions

      b) Administered to all sample grades K and 1 children

      c) Pre-/post-test

   2) Cooperative Primary Listening Test, Form 23A

      a) Nationally standardized test to assess listening skills in comprehension, recall, and interpretation in everyday school situations

      b) Administered to all sample grades 2 and 3 pupils

      c) Pre-/post-test

d. Speaking

   1) Speaking Test

      a) HEP-developed test to assess speaking/listening skills

      b) Administered to all sample grades K-3 pupils

      c) Post-test only

e. Self-direction

   1) Classroom Observation

a) HEP-developed observation form to assess the degree of self-directed behavioral characteristic demonstrated by selected sample pupils and the total sample class.

b) All sample HEP classrooms

c) Post-test only

2) Classroom Teacher Rating

a) HEP-developed rating form on 14 behavioral characteristics considered to be indicators of pupil self-direction

b) All sample grades K-3 pupils

c) Post-test only

3) Anecdotal Records

a) All HEP teachers asked to submit, on voluntary basis, anecdotes of student behavior indicating self-directed or independent behavior

b) Data collected in May, 1971

f. Self-Concept, Motivation, and Attitudes

1) Self-Concept and Motivation Inventory (SCAMIN), Early Elementary Form

a) Nationally developed inventory to assess student self-concept and motivation toward school

b) Administered to all sample grades K-3 pupils

c) Pre-/post-test

2) Attitude Toward School and School Activities

a) HEP-developed survey to assess attitudes toward school and school activities

b) Administered to all sample grades K-3 pupils

c) Pre-/post-test

g. Opinions and Attitudes

1) Student and Parent Interviews

a) Interviews to obtain opinions and attitudes about the new English program

b) Administered to about one-third of the sample HEP student population and parents of these students

  - c) Post-test only

- 2) Classroom Teacher, School Principal and Installation Teacher Questionnaires
  - a) HEP-developed questionnaires to determine attitudes and opinions toward HEP
  - b) Administered to all sample HEP classroom teachers and school administrators, and all Installation teachers
  - c) Post-test only

- 3) Visitors Questionnaire
  - a) HEP-developed questionnaire to determine attitudes and opinions of visitors to HEP classrooms
  - b) Voluntary, by all visitors to HEP classrooms

- 4) On-site Interviews and Classroom Visitations
  - a) To assess the impact of the new English program at the local school and district levels
  - b) Group interviews in each district held separately with classroom teachers, school administrators, Installation teachers, and District HEP coordinators
  - c) Data collected in November and in May and June, 1971

h. Other Data and Assessment Devices

- 1) California Test of Mental Maturity (CTMM)
  - a) Nationally standardized aptitude test, used as part of the State Minimum Testing Program for all second graders throughout the State
  - b) Used as IQ covariate and to stratify pupils into ability subgroupings in the analysis in test data
  - c) Administered to all second graders in February of each school year
  - d) 1970-71 results used for sample second graders
    1969-70 results used for sample third graders

- 2) Kuhlmann-Anderson Tests, Forms K and A
  - a) Nationally standardized test to determine aptitude of pupils
  - b) Used as IQ covariate and to stratify pupils into ability subgroupings in the analysis of test data

c) Form K administered to all sample grade K pupils and Form A to all sample grade 1 students

d) Administered in October, 1970

3) Demographic Data

a) HEP-developed form to obtain socio-economic status of parents/guardians of sample grades K-3 population

b) Collected in October, 1970

4) Attendance Data

a) Number of days absent data collected for all sample grades K-3 pupils

b) Data collected as of May 10, 1971

5) System Adherence Log

a) HEP-developed form, to determine the degree of adherence to the HEP system in all classrooms

b) All Installation teachers required to submit the form for all of the classes they supported

c) Data collected in May, 1971

6) Installation Teacher Log

a) HEP-developed form, to determine the role played by Installation teachers in statewide implementation of HEP

b) All Installation teachers required to report the percentage of time spent in various activities, and the amount and type of work involved in their role as on-site resource teachers

c) Data collected for the weeks of:

October 26-30, 1970
November 16-20, 1970
February 1-5, 1971
April 19-23, 1971

There were several factors that delimited full implementation of this design. The pre/post measure approach was not completely implemented. The previously enunciated principle of not unduly distorting the HEP materials or the social system of the school contributed to the decision not to fully implement the pre/post aspect of the design. Other factors were: (1) the inability to measure some aspects of HEP because of the relative immaturity of the kindergarten students, (2) the lack of instrumentation in the areas of "self-directed learning" and speaking," (in this case the instruments had to be created and could not be ready in time for the pre-measure use), and (3) the inability of tests suppliers to deliver selected tests in time for pre-measure use. Some aspects of the HEP program represent new areas of instruction at the primary level and as such prepared testing devices are just not available. Typewriting is an illustration.

In selecting the instrumentation used to measure the various aspects of HEP, the following sources were considered:

a. National standardized instruments available; for example, the Gates-MacGinitie Reading Test (see the following comments on achievement testing).

b. Research instruments available from other evaluation or research project; for example, the SCAMIN attitude measure.

c. HEP-developed instruments previously used for "internal" evaluations; for example, the Handwriting Test.

d. DOE use of the instrument in previous or concommitant evaluations; for example, self-direction assessment instruments.

e. Trial samples of instruments currently being developed; for example, the Speaking Test.

When contrasting the instruments from the above sources, the following factors were considered:

a. Objectivity of the test

b. Degree to which the test is "fair" to the experimental and control groups

c. Time and training required for administration

d. Reliability and validity of instrument

e. Suitability of test for age of students tested

f. Cost of tests and test administration

g. Availability of test

6. Nationally Standardized Tests

The Language Skills component is a combination of unique sets of instructional materials and instructional procedures that both allow and require individualization of learning. Both instructional procedures and learning materials are designed to permit the student to proceed at his own rate of learning--a rate dependent in part on both areas and depths of interests. Further, the rate of progress in learning to read is dependent on the successful accomplishment of the various prerequisite experiences. To the extent the individualized procedures are successfully implemented, and the unique materials are successfully used, comparison to the results of traditional instruction is difficult and complex. Examination of plans and preliminary results indicates a reasonabily high degree of success in both instituting the individualizing procedures and in introducing of materials.

One element expected in a comparison of HEP to traditional programs was the use of nationally standardized reading tests. A few assumptions underlying the standardized tests and their attendant grade/norm reporting system illustrates some of the pitfalls and consequent safeguards needed in interpreting this comparison.

a. Content of items in the national reading tests assumed all students experience both common materials and instructional procedures in the reading program.

   1) The vocabulary tested by the various instruments assumes that students master a common group of words in the learning-to-read process. This seems to be based on the further assumption that children being assessed by the test have and develop a common experiental background or cultural understanding to the learning/testing situation.

      The assumption that a common group of learned words and a common background or cultural understanding with groups for whom the national reading instruments were created is opposed to the basic implications of individualized learning, as exemplified in the HEP.

   2) The fact the tests are administered to all children at the same time assumes all the children are proceeding at the same rate in learning to read and, further, all children are proceeding on the same "path" in learning to read.

b. The traditional way of interpreting national standardized achievement tests reinforces a concern for the assumption in a2 above. To score the tests by translation to grade norms, even where test items were consistent with the content of instruction, would be inappropriate in assessing individualized programs.

The statement "Children can or cannot read" is almost wholly meaningless unless modified in terms of what is to be read. This affects the interpretation of test results when HEP students are assessed using a standardized grade/normed reading test. The HEP student using the standardized tests, would be characterized as reading at a specific grade level (and not above it) in terms of material that bears little or no relationship to the materials he actually learns to read.

Perhaps an even more significant problem in the use of nationally standardized, grade/normed reading tests results, when comparing the HEP language skills program with a traditional classroom, because vocabulary content of the HEP program deviates from vocabulary presented in a traditional reading program. In the HEP program, this deviation is seen as essential in making the instruction more relevant to student needs, interests and backgrounds. Results of this deviation, when considered in terms of the use of national standardized grade/normed achievement tests, raise the problem of "frustration level." Albert J. Harris, in his book How to Increase Reading Ability (David McKay, 1961), makes the following point:

> "Signs of emotional tension or distress can be found in the child's color, breathing, facial expression, voice and so on. He makes mistakes not only on unknown words but also on some words that he usually recognizes without difficulty. Most children begin to show frustration when word recognition errors rise above 5%." (Emphasis is added)

In one sense, the modification of vocabulary content to capitalize on student needs and interests interacts with the concept of "level of frustration" that almost guarantee low test scores. Its importance, when considered in light of other comments on reading achievement testing, is not to say that nationally standardized tests should not be used in HEP evaluation, but rather to make the point that a valid interpretation of the results requires extensive knowledge of achievement testing, reading instruction, and the HEP program.

7. Covariates

The previously enunciated principle of a real school within a real but changing environment led to the decision to be concerned with collection of data about that environment. This includes attitudes about HEP held by students, teachers, principals, installation teachers and parents.

Because student achievement has been previously shown to be influenced by several factors, data on student IQ scores and socioeconomic status (SES) was gathered. Previous internal HEP studies have used age, years in school, sex, IQ, and SES (among other things) as covariates in the analysis of student behavior change. A similar covariate approach was used in the evaluation/audit.

Another significant feature of the evaluation design was the need to account for the effect of varying patterns of school organization--self-contained or 3-on-2, and the range of student ages represented in the classrooms (e.g., K, K-1, K-1-2, 1-2, etc.).

These organizational elements appeared,on preliminary analysis, to have a significant impact on student achievement when using HEP materials and processes. They were, therefore, considered in both sampling and data collection.

The evaluation plans call for a preliminary report at the end of the project. A full evaluation of HEP, however, can only be made after at least three years. The factors contributing to this are: (1) teacher and student familiarity with the Skills material is still a significant factor in the "cumulative impact" effect, (2) not enough students have fully utilized the total set of completely developed Skills, Systems, and Literature materials to fully examine the multiplier effect, and (3) the final evaluation of the HEP Skills materials should examine the impact on years following the HEP experience and in other subject areas and behavioral arenas. For these reasons attention and resources should be devoted to the development of a longitudinal evaluation plan.

8. Other Considerations in the Evaluation Design

Every attempt was made to keep costs of the evaluation and audit as low as possible, and at the same time provide accurate, valid, and timely information to the decision-makers. The importance of curtailing costs was to use as much of the funds as possible to continue the HEP development and installation. For this reason, the sampling procedures utilized allowed analyses of results in the two forms of classroom organization: 3-on-2 and self-contained. Further, a beginning of the cumulative impact assessment mentioned previously was made by arranging the sampling to represent Field, Pilot and Installation schools. Control groups were identified and student selection procedures were outlined.

It should be noted further that the results of this evaluation of the HEP may have been contaminated by the effects of the 3-on-2 classroom organization. The HEP is an innovation in curriculum, whereas the 3-on-2 classroom organization can be considered more in terms of a classroom management tool. Reports from the field indicated that the effect of the adjustment to HEP by teachers new to both HEP and the 3-on-2 was both positive and negative. Teacher attitudes toward HEP, and indirectly student, administrator, and parental attitudes, may have reflected the impact of the 3-on-2 adjustment and not necessarily the program itself.

In addition, the teaming effect of the 3-on-2 organization was, to some degree, the variable affecting the teacher attitudes toward HEP. Teams that were compatible tended to be more favorable toward HEP, whereas team members who had difficulty in adjusting to each other tended to be less favorable toward the program.

As a consequence of this difficulty among some teachers to differentiate HEP from the 3-on-2, the results of this evaluation on the effect of HEP may be a reflection of the impact of the 3-on-2 implementation. This variable needs to be carefully scrutinized in the final interpretation of the HEP evaluation findings.

A further aspect of the statewide implementation of the HEP, which may have affected the overall effect of the program (in terms of student achievement and student, teacher, administrator, and parental acceptance and attitude toward the program), was the support generated at the district and school levels. Among the district personnel, curriculum specialists were assigned the responsibility of coordinating the HEP efforts within their districts. All but one of the seven district coordinators had previous orientation and training for a support role in the pilot trials of the HEP.

In addition, forty-four full-time off-ratio teachers were assigned to districts to assist teachers in the implementation of the HEP. Most of these Installation Teachers (formerly called On-Site Resource Teachers) had little or no training and experience in a supervisory-resource capacity. Feedback from questionnaires indicate that the I.T.s were hampered by administrative paperwork, including inventorying of HEP materials delivered to schools in the installation package. Varying responsibilities assigned to them by the school principals also affected the degree of support provided to classroom teachers by the Installation Teachers.

In the case of widely separated schools in remote areas, ten classroom teachers teaching in either the 3-on-2 or S.C. class were asked to undertake the training given to Installation Teachers. These ten teachers, in effect, became the on-site resource people for their schools. These

Remote Area Installation Teachers served in lieu of the Installation Teachers in schools where geographic spread made the services of an Installation Teacher less than efficient.

Two additional problems need to be discussed in terms of the total impact of the statewide implementation of the HEP. These relate to the delays encountered in delivery of HEP materials to schools and the defective materials in the HEP package. Each will be discussed separately in the sections following.

F. HEP Materials Delivery Schedule

The evaluation of the effects of the Hawaii English Program must be viewed in relation to total implementation of the program in schools throughout the State. The scope and magnitude of the HEP installation, and the inherent problems and difficulties associated with bid proposals and specifications, production, and delivery of materials and equipment to schools throughout the State created an impact at the local school level that has trememdous bearing on student outcomes anticipated in the evaluation.

In September, 1970, 243 classes were scheduled to implement the Language Skills grades K-1 and the Literature-Band I grades K-2 packages. These included materials for 133 three-on-two and 100 self-contained classrooms. In addition, 46 Field and Pilot school classes were also scheduled to receive portions of new materials not previously distributed. The overall installation required distribution of over 47,277 sets of materials and equipment to each elementary school in the State of Hawaii.

Installation was planned for two increments: a September and a December package. Materials and equipment needed during the early weeks of school were scheduled for the September delivery. Advanced level materials not needed until later in the school year were scheduled for delivery in December. However, because of the later award of contracts for self-contained installations, the first package for these classrooms was scheduled for October 15, 1970.

The 3-on-2 installation package was scheduled for delivery by September 15. Unforeseen production problems, specification changes, cancellations, and changes in shipping schedules delayed the first deliveries until the end of September and the early part of October. In addition, there were a few commercial books that were out of stock, and two software items were rejected because of generic defects.

In terms of equipment, most of those needed for the HEP program were delivered in late August, September and October. However, problems developed because of delays in delivery of software materials to schools. A compilation of actual delivery for each subprogram is shown in Table 1. Appendix 3 lists the delivery schedule for specific units within each subprogram.

Table 1. HEP Language Skills Software Delivery Schedule

Actual Date of Delivery to Honolulu by Vendor*	Reading		Writing		Listening/Speaking		Typewriting	
	No. of Units	Days Late	No. of Units	Days Late	No. of Units	Days Late	No. of Units	Days Late
3-on-2 Schedule:								
8/ 4/70			1					
8/20/70			3					
9/ 8/70	1		6		1			
9/20/70	4		4		3		2	
	8	13					2	13
9/28/70	1							
10/20/70	5		1		2			
	1	43	1	41	2	3		
	2	44	3	43	1	70		
11/ 9/70							1	23
11/18/70	2	32						
	5	73						
Self-Contained Schedule:								
8/ 4/70	1		1					
9/ 8/70	1		1					
9/20/70							5	
10/20/70	2		8					
11/ 9/70					2		1	23
					1	13		
					3	22		
					1	39		
11/18/70	2	22	2		1			
	1	32	5	22	1	22		
			1	45				
12/ 9/70	16		1	21				
	2	10						
	1	16						
	1	18						
	1	21						
	1	43						
	11	73						

* Actual delivery to schools took another 2-3 weeks.

The data shown in Table 1 reveal that 62% of the units needed for the reading subprogram in three-on-two classrooms, and similarly 50% of the units needed for self-contained classrooms were late in delivery to schools. The range in delayed days was from 10 to 73 actual work days. For the writing subprogram, only about 21% and 37% respectively of the materials were delivered late to 3-on-2 and self-contained classrooms -- with delays ranging from 21 to 45 days. About one-third of the Listening/Speaking materials were delivered late to 3-on-2 classrooms, whereas over two-thirds were delayed to self-contained classrooms. The deliveries ranged from 3 to 70 days late. In contrast to the latter subprograms, 3-on-2 classrooms received 60% of their typing materials late, while only 20% were delayed to self-contained classrooms. The delays for the latter subprogram were somewhat milder, ranging from 13 to 23 days late.

The analyses on the foregoing data show that the reading subprograms in both types of classrooms were affected the most in terms of delayed arrival of materials. The dilemma was additionally compounded because the original delivery, in most instances, was scheduled after school was in session, and by the fact that the delivery of materials did not coincide with the planned sequence of utilization in some instances. That is, some of the advanced program materials were delivered before the lower level units.

The failure of vendors to deliver materials as scheduled has affected the data collected in the following ways:

1. Pupil achievement on measuring instruments used in the evaluation of the Skills subprogram. In some instances, children were not able to enter programs for over one-half of the school year.

2. Teacher/school administrator/parental attitude toward the HEP program. Anxieties associated with the introduction of a new curriculum were heightened by the delays, and as a consequence, reactions to the new program were initially altered.

3. Teacher/school administrator morale. Responses through formal discussions held with those in the field indicated that the delay in the delivery of the materials quickly diminished the enthusiastic attitudes developed by teachers during the pre-service training period.

Kindergarteners and first graders, particularly those in Installation schools, undoubtedly were affected the most by the delays in delivery of materials to schools. Although new classes were added, Pilot and Field schools were able to make adjustments by sharing materials installed in previous years.

The extent of the effects of the later deliveries can only be speculated. It is assumed that achievement by HEP children, particularly in the reading skills, were adversely affected by the lack of materials earlier in the school year. Similarly, the listening/speaking subprograms were placed at a decided disadvantage because of the late deliveries. Thus, the overall effect of the late delivery may be two-fold. First, poor performance on the part of sample HEP pupils on the various measuring instruments may be a reflection of the failure of children to receive full exposure to the new curriculum. Secondly, significant gains made by HEP pupils on the various instrumentation, despite their limited experience with the new materials, may be a positive reflection of the interacting functions of the program. At any rate, interpretation of all collected data should take full consideration of the possible effects of the late deliveries of HEP materials as described above. Failure to do so would make the comparisons in achievement gains between HEP and non-HEP children less than desirable.

G. Defective Materials

During the first few months of installation of the HEP program, feedback had been received from teachers about the quality of HEP materials. A survey, based on 10% of the HEP 3-on-2 and self-contained installation classrooms, was conducted in January, 1971, to determine the seriousness of the problem. Results of the survey suggested that an average of about 12% of the HEP materials was of a defective nature. Further analysis of data revealed that approximately 4% of the materials were damaged and about 8% had defects of varying degrees of seriousness. See Table 2.

Table 2. Total Estimated Percentages of Defective Materials

Program	Damaged Units	Other Defective Units*	Total
Reading	6.46%	11.68%	18.14%
Handwriting	8.26%	11.26%	19.52%
Aural/Oral and Stop-gap	1.57%	3.74%	5.31%
Equipment	0%	3.49%	3.49%
Average	4.07%	7.54%	11.62%

*This includes missing units

When the various HEP subprograms were considered separately, the handwriting program seemed to be most seriously affected. An estimated 20% of the materials were found to be defective. Of this total, approximately 8% belonged to the "damaged" category and slightly more than 11% had defects of various kinds. Poor lamination and tearing at the binding were two major defects. For a breakdown of the data, See Table 3.

Table 3. Handwriting Program

Item	Nature of Problem	No. of Units	Estimated Percentage
Film loops:	Damaged cartridges/films (burned, tangled, etc.)	88	8.26%
	Cartridge containers missing	4	Less than 1%
	Film loop missing	1	Less than 1%
Audio cards:	Pockets missing, worn, damaged	10	1%
Laminated books:	Poor lamination	57	5.35%
	Tearing at the binding	45	4.22%
	Error on page	1	Less than 1%
	Missing books	2	Less than 1%

In addition, film loops were also reported to have exhibited the following defects: (1) black spots on film; (2) unclear pictures; (3) overexposure; (4) showing only parts of a picture; (5) scratches; and (6) generally poor quality.

The reading program also had problems in terms of poor quality materials. Approximately 18% of the materials were reported to be defective. About 6% were described as "damaged" and 12% were judged to have defective components. See Table 4 for a breakdown of the percentages. No data were obtained for cassette tapes as they had all been recalled for adjustments at the time of the survey.

Table 4. Reading Program

Item	Nature of Problem	No. of Units	Estimated Percentage
Stacks:	Rods broken	29	1.80%
	Damage reported only	75	4.66%
	Total Damaged at Present	104	6.46%
	Holes on wrong side of cards	3	Less than 1%
	Wrinkled cards	2	"
	Missing	2	"
	Lamination poor	22	1.37%
	Mislabeled	1	Less than 1%
	Cards in error	17	1.06%
	Previously repaired (rods, nuts, screws, lamination, etc.)	127	7.89%
	Total Other Problems	174	10.81%
	Total problems with stacks (implementation to present)	278	17.28%
Audio Readers:	Cards missing	1 set	Less than 1%
	Cards worn (no lamination)	3	"
	Poor sound on card/tapes	2	"
	Containers missing/damaged	6	"
	Books damaged	1	"
Taped Reading:	Books missing	1	Less than 1%
	Cassette tapes--all recalled for adjustment		

The Aural/Oral program (including Stop-gap) presented only a mild problem. Less than 2% of the materials were reported to be damaged and approximately 4% were said to have other defects. Since the latter percentage includes missing units, the problem of defective materials seems negligible. See Table 5 for a breakdown of percentages.

Table 5. Aural/Oral Programs (Including Stop-Gap)

Item	Nature of Problem	No. of Units	Estimated Percentage
Booklets/Cards:	Mislabeled pages, etc.	4	Less than 1%
	Poor binding	3	"
	Missing	2	"
	Poor lamination	3	"
Tape (Diagnostic, etc.):	Damaged	1	Less than 1%
	Missing	2	"
	Poor quality of sound	1	"
Envelopes:	Missing	3	Less than 1%
	Size too small for cards	2	"
Sheets (Diagnostic, colors, shapes, etc.):	Missing	4	Less than 1%
Flash cards:	Mislabeled	3	Less Than 1%
	Missing	1	"
Audio-cards:	Damaged	13	1.13%
	Mislabeled	6	Less than 1%
	Missing	7	"
Containers:	Damaged	4	Less than 1%
	Size (slots) inadequate	2	"

The main problem with the typewriting subprogram seemed to be the peeling and tearing of pages by stickers since the former was not laminated. The booklets were otherwise usable and presented no problem. Lamination of the booklets was therefore recommended. Three teachers reported errors in directions which were since corrected.

The HEP hardware seemed to be in generally good condition and percentages of defective components were extremely low. All the percentages were in fact found to be lower than 1%. A sum total of about 3% of the equipment was reported to have defective features. The problem with the typewriting subprogram was therefore considered as mild and negligible. See Table 6 for details.

Table 6. Equipment

Items	Nature of Problem	No. of Units	Estimated Percentages
Cassette Tape Recorder:	Faulty volume control	1	Less than 1%
	Faulty take up spindle	1	"
	Previous repairs	4	
	Difficulty with stop-eject button	3	"
Headset:	Defective (no sound, etc.)	4	Less than 1%
	Previous repairs	1	"
Sound Bar:	Defective (no sound)	1	Less than 1%
	Missing	1	"
Typewriter:	Defective (keys stuck, etc.)	3	Less than 1%
	Previous repairs	4	"
Super 8 Projector:	Previous repair	1	Less than 1%
Power Bar:	Missing	1	Less than 1%

It should be noted in passing that some HEP schools reported no problems at all with regard to some of the materials. This was probably because the materials, which were delayed in delivery, had been in use in these schools for only a relatively short period of time at the time of the survey.

The effects of the defective materials on pupil achievement can only be speculated. Obviously the reading and handwriting programs were affected the most by this problem. When coupled with the late installation of the program, the problems associated with the defective materials become magnified and may have seriously distorted achievement performances on the different measuring instruments used to evaluate the HEP.

Consideration of this problem must be made in analyzing the interpretation of test results.

H. Design for Analysis of Data

A total of 16 measures were used in the present evaluation study. Out of these 14 were performance measures of one kind or another, including the basic skills in reading, writing, listening, and speaking. Specifically these measures were: Gates-MacGinitie Test (2 measures), Reading Diagnostic Test, Handwriting exercise, Taped Listening exercise for kindergarten and first grade and Cooperative Primary Listening Test for second and third grade, Speaking Test (3 measures), Self-concept and Motivation Inventory (3 measures), Attitude Toward School and School Activities, Number of Books Read, and Number of Days Absent. The other two measures were IQ (as measured by the Kuhlmann-Anderson Intelligence Test for kindergarten and first grade pupils and the California Test of Mental Maturity for second and third grade pupils) and socio-economic status based on Hollingshead's Two-Factor System.

All performance measures were administered both as pre and post tests to sample pupils with the following exceptions:

(1) The Handwriting Exercise was not administered to kindergarten children.

(2) The Taped Listening Exercise was administered to kindergarten children only as a post-test.

(3) The Speaking Test was administered to all sample children only as a post-test.

(4) Pre-testing did not apply to Number of Books Read and Number of Days Absent.

Test data was coded and key punched by the HCC evaluation staff and subsequently analyzed at the Computing Center, University of Hawaii. With regard to statistical procedures, the analysis of co-variance was performed on the collected data except in the case of the Reading Diagnostic Test, Number of Books Read and Number of Days Absent, where simple frequency counts appeared to be more appropriate.

In the analysis of co-variance, the various achievement and attitudinal measures were used as dependent or criterion variables with IQ and SES as basic co-variates. In addition, whenever pretests were administered, pre-test scores were used as the third co-variate.

The reason for the use of the analysis of co-variance was because it was felt that this technique would be more reasonable to compare HEP and control pupils on their attainment within the school year covered by the evaluation study. This meant, of course, that past experiences had to be partialled out in the analysis, hence the use of pre-test as a co-variate. It would have been meaningful to simply use the analysis of variance procedure if all HEP pupils had been in the program all along. That is, for the past three or four years in the case of second and third grade children. As this was not the case, the analysis of variance procedure would have confounded present performance of HEP pupils with their past achievement, both HEP and non-HEP. It should be noted, on the other hand, that the analysis of co-variance procedure would, as it did in the present study , preclude any possible long-range cumulative effects from showing up in the results.

The analysis was carried out separately for each grade level. Where the sample size was large enough, pupils were subgrouped by type of school (Installation, Pilot, Field, and Control) and classroom organization (self-contained and 3-on-2). Kindergarten and first grade pupils, for instance, were subgrouped in this manner. Second grade children were subgrouped only by type of school (Pilot, Field, and Control). The sample size for third graders was relatively small and pupils were subgrouped into HEP and control groups only.

In using the analysis of co-variance procedure, homogeneity assumptions or within-class variances and regression coefficients were simply assumed to hold for the collected data. It was felt that this was justifiable on the basis that tests of significance in the analysis of co-variance was robust with regard to violation of these assumptions (see Winer, 1971;[1] Kirk, 1968;[2]and McNemar, 1969[3]).

In all the analysis routines, comparisons were made between mean scores of HEP and control pupils. Where more than two groups were compared simutaneously and the resulting F-value turned out to be significant, subsequent tests were conducted to identify groups that differed from each other significantly. The critical significance level was set at .05.

Previous evaluation studies of the HEP provided some evidence that the program might be more beneficial to low ability pupils than to high ability children. To further look into this facet of the HEP and to stratify samples for the intrinsic value of stratification, the HEP and control pupils were subdivided into high, medium and low IQ groups by grade level. Where pupils were subdivided into these IQ groups, the high group consisted of pupils whose IQ scores were at least one half a standard deviation above the mean for a particular grade level. The low group, likewise, consisted of pupils whose IQ scores were at least one half a standard deviation below the mean for the grade level. The medium group consisted of the rest of the pupils of the same grade level. Third grade pupils, whose sample size was relatively small, were sub-divided into high and low IQ groups only: children with IQ scores higher than the mean being in the high group and children with IQ scores lower than the mean being in the low group. The IQ means scores and standard deviation for the various grade levels were tabulated as follows:

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(1) Winer, B. J. Statistical Principles in Experimental Design. New York: McGraw-Hill, 1971.

(2) Kirk, R. E. Experimental Design: Procedures for the Behavioral Sciences. Belmont, California: Wadsworth Publishing Company, 1968.

(3) McNemar, Q. Psychological Statistics. New York: John Wiley & Sons, 1968.

IQ Mean and Standard Deviation

Grade Level	N	Mean	S. D.
K	375	99.46	14.99
1	279	104.74	15.63
2	85	101.27	12.83
3	62	100.39	12.42

Analysis of co-variance was performed on the collected data for the various IQ subgroups for each grade level. Comparisons of mean scores of performance measures were made between HEP and control pupils of "comparable" ability levels. The critical significance level was set at .05.

I. Educational Audit

Another aspect of the HEP evaluation is worthy of note. This evaluation uses the educational audit concept to insure use of objective assessment, appropriate data, valid data reduction methods and interpretation. It also allows the use of the efficient communication links and data collection points inherent in the DOE operation. The other benefit of using the audit approach is that it allows the aspect of evaluation that contribute to further program development (formative) to be integrated with the aspects of evaluation that examine the effectiveness of the system as a whole (summative). This integration of different kinds of evaluation efforts, with the insurance of objectivity and validity of overall evaluation reports, stretches both the evaluation and development dollars.

J. Audit Plans

Data collection sites were visited by the contracted educational auditor during the last three weeks of November. Purposes of the visit were:

1. Confirmation of the presence of students selected for both experimental and control samples
2. Check on the appropriateness of data collection procedures
3. Observation of the system adherence variable
4. Assessment of cooperative relationship between the local district, DOE personnel and HEP personnel
5. Observation of the impact of the evaluation materials on the HEP, as well as non-HEP, teaching/learning environment

During the same period, the assessment items were checked through the HEP evaluation center processing so the accuracy of data flow, manipulation and reduction could be verified.

A repetition of the schedule was made in the spring. The spring visitation was in greater depth. A final audit report based on this visitation is discussed elsewhere in this report.

K. Description of Sample Student Population

The selection of sample students for the evaluation of the Hawaii English Program first involved the selection of sample schools. Using randomization procedures, students were selected from the demographic sheets (Appendix 5) submitted by selected schools. It should be made clear that the individual student and NOT the school was the unit for analysis in the evaluation of the new English program. (See Appendix 6 for list of sample schools that were randomly selected for the study)

Students from the identified classes were randomly selected from these schools for the various sample groups. Particular care was taken to insure representation from each district, each grade level, each type of classroom organization (e.g., 3-on-2 or self-contained), each type of grade level combination (e.g., K-1, K-2, etc.), and from the control classes those that were non-HEP for both the 3-on-2 and self-contained classes. More than one classroom was selected from some of the schools to facilitate the data gathering procedures.

Of the five Field schools, (one on Oahu and four on Molokai), Kalihi-Uka and Kualapuu were selected for the sample group. The basis for selection was the involve students in classes having teachers experienced with HEP and to include students who had experienced the HEP program during the past four years. Sample students thus represented students and teachers having had from no experience to four years of HEP experience. Each grade level (K-3) was included. The sample students were intended to be representative of all Field School students.

Classes from five of the seven school districts' Pilot schools were randomly selected to be in the sample group. Honolulu and Hawaii District Pilot schools were not represented because of their unique situations. Selection of Pilot school students was to enlarge the sample groups of students having more than one year of experience. These sample students would also have been exposed to a learning environment with students and teachers having had over one year of HEP experience. All four grade levels were represented. The sample students were intended to be representative of Pilot school students.

Installation schools were randomly selected to represent each school district and all schools in the State, sample size being proportionate to student enrollment and size of district. Sample classes from these Installation schools and sample students from these classes were randomly selected to represent students throughout the State. Only grades K and 1 students were selected because the HEP installation only called for the K-1 program in this initial statewide implementation.

Control school classes were selected as being representative of their districts, providing they met all the constraints (see Appendix 7). Sufficient sample students were selected from each grade level (K-3) so that a comparison could be made between the experimental and control students.

Single (e.g. K, 1, 2, & 3) and heterogeneous (e.g. K-1, K-2, 1-2, etc.) grade level groupings, and both types of classroom organizations (3-on-2 and S.C.), were selected for the sample groups from all four classifications of schools (Field, Pilot, Installation and Control).

A review of the 1970-71 statewide test results on the California Test of Mental Maturity, administured to all grade two pupils as part of the State Minimum Testing Program, provides some insights into the ability levels of pupils selected from the sample schools (See Appendix 8 for mean CTMM scores for all sample schools). The results show that of the thirty-three Installation schools, 61% of the schools were above the state mean, whereas about 36% were below. One school had the same mean score as the state norm. Of the five Pilot schools, two schools each were above and below the State mean, while another was at the State mean. Both Field schools were below the State mean -- ranking 47th and 48th out of a total of 49 sample schools. Forty percent of the control schools were above the State norm and 60% were below.

The foregoing findings have particular significance in the comparisons made between HEP and non-HEP second and third graders on the various measuring instruments. Of the five HEP schools from which sample second and third graders were selected (Shafter, Kapaa, Makaha, Kualapuu and Kalihi-Uka), only one was at the State mean. The other four were all below the State norm -- three considerably below the mean. In contrast, of the three non-HEP schools from which sample second and third grade pupils were selected (Hahaione, Pearl Harbor and August Ahrens), two were above the State mean and one below.

Further insight into the caliber of the sample students used for the evaluation is provided by the data shown in Table 7.

Table 7. Mean IQ Score for Sample HEP and Non-HEP Pupils

	Field	Pilot	Installation	Control
Kindergarten:				
N	18	30	207	9.8
Mean	96.94	100.17	101.04	96.65
F-Value***	<1(NS)	1.25(NS)	5.62*	
1st Grade:				
N	15	39	99	107
Mean	104.20	110.36	103.03	104.30
F-Value***	<1(NS)	4.44*	<1 (NS)	
2nd Grade				
N	20	15		50
Mean	93.05	101.07		104.62
F-Value***	13.18**	1.00 (NS)		
3rd Grade				
N	25	2		35
Mean	94.44	91.50		105.14
F-Value***	13.01**	2.74(NS)		

NS - No Significant differences between groups at the .05 level
* - $p < .05$
** - $p < .01$
*** - Comparisons made with control pupils.

The data in Table 7 reveal that there were some significant differences between groups at the different grade levels. Among kindergarteners, there were significant differences ($p < .05$) between the HEP installation and control pupils, favoring HEP. Installation and Pilot school pupils had similar scores, while Field and control children had almost identical mean scores. In all categories, HEP pupils had higher scores than non-HEP.

A somewhat similar pattern existed between first grade students. Significant differences at the .05 level were noted between Pilot and control school children, favoring HEP, while Field and control pupils had similar scores. Between control and HEP Installation and Field scores, however, the non-HEP group had a mild advantage.

The mean IQ scores between second and third graders showed a consistent pattern in favor of the non-HEP pupils. Control second and third graders had significantly higher score ($p < .01$) than Field school children, and higher but not statistically significant IQ means than Pilot school pupils.

A further analysis of IQ scores was conducted by comparing IQ means by ability level subgroupings. Scores for pupils in grades K-2 were stratified into three subgroupings by taking mean scores one-half standard deviation above and below the total group IQ mean for the high and low subgroups respectively. For third graders, the scores were divided into two subgroups by taking scores above and below the total group means for the two subgroupings.

A review of the data in Table 8 reveals that there were no significant differences at the .05 level of significance between groups at all four grade levels except between the high ability first graders. However, in eight of the eleven subgroupings, non-HEP pupils had higher IQ means than their HEP counterparts. Although there were wide disparities in some instances, no statistical significances were noted because of the sample sizes and the interacting effects within groups.

Table 8. Comparisons of Mean IQ Scores Between HEP and Non-HEP Pupils By Ability Groupings

	High		Medium		Low	
	HEP	Non-HEP	HEP	Non-HEP	HEP	Non-HEP
Kindergarten:						
N	82	23	107	37	66	38
Mean	117.13	114.43	98.80	98.41	83.15	84.18
F-Value***	1.91 (NS)		<1 (NS)		<1 (NS)	
1st Grade:						
N	44	32	60	39	49	36
Mean	125.07	121.22	104.22	104.90	87.98	88.61
F-Value***	5.79*		<1 (NS)		<1 (NS)	
2nd Grade:						
N	5	22	16	19	4	9
Mean	113.60	115.41	100.06	100.74	86.29	86.44
F-Value***	< 1 (NS)		<1 (NS)		<1 (NS)	
3rd Grade:						
N	7	22			20	13
Mean	105.57	111.59			90.25	94.23
F-Value***	2.85 (NS)				1.85 (NS)	

NS - No significant differences between groups at the .05 level.
* - $p < .05$
*** - Comparisons were made with corresponding control groups.

The data further reveals that among low ability pupils, non-HEP pupils had consistently higher IQ scores than HEP children. The medium ability group were the most comparable in terms of mean IQ scores, although mildly favoring non-HEP pupils.

The greatest differences in IQ means were between the high ability pupils. HEP kindergarten and first graders had higher scores than their non-HEP counterparts, whereas the reverse held true between second and third graders. A significant difference between first graders was found at the .05 level, favoring the HEP group.

The findings described above have major significance in making comparative interpretations of the data collected. For example, it is generally accepted that the achievement performance of pupils with high intelligence levels will tend to be greater than those with lesser capabilities. In making comparisons between groups, particularly in cases where the general aptitude level is significantly different, pupils with higher intelligence levels are expected to perform better. In instances where there are differences in achievement results, whether they are statistically significant or not, and the performance favors the less capable children, it can be assumed that the favorable performance of these pupils is, to some extent, a function of the effects of the learning program they are engaged in.

In applying the concept described above to the comparisons made between HEP and non-HEP pupils on the various test results, the issue is further compounded by the problems encountered with the delivery of the HEP subprograms to schools (described elsewhere in this report). The evaluation on the sample student population comparing the effects of the Hawaii English Program and other language arts programs become somewhat unequitable because of the differences in time in the commencement of both instructional programs. Furthermore, because of the large number of measures that had to be administered coupled with the element of time, no make-up for tests missed were scheduled. As a consequence of the above and the problem of sample mortality, sample sizes for some comparisons were smaller than anticipated. The ability levels of the remaining sample pupils thus may have been skewed within the various subgroups used for the comparative analyses. The resulting findings, therefore, may not necessarily reflect the actual performances of all pupils selected for the sample groups.

The statistical procedures used in this study managed to adjust test scores to some extent, thereby making the experimental and control groups more comparable. However, for some measures, for example where pretests were not administered, it is difficult to nullify all influencing factors.

For these reasons, the foregoing descriptions of the sample population, and the associated difficulties delineated, should be fully considered in drawing conclusions from the findings of this comparative study. Failure to do so would be an injustice not only to the instructional programs involved, but to the teachers and school administrators in the field as well.

L. Description of the Sample HEP Professional Personnel.

A total of 117 classroom teachers from both 3-on-2 self-contained classrooms, 42 school principals and 53 Installation teachers were selected for the sample HEP professional staff population. Classroom teachers and principals were from the selected sample schools described earlier. All Installation teachers assigned to schools were involved, including 45 non-teaching Installation teachers and eight remote-area Installation teachers.

Over 72% of the 3-on-2 classroom teachers attended the two-week district workshop, while over 84% self-contained teachers similarly attended the workshop. Only 5% of the field school and 63% of the Pilot school Installation teachers attended the six-week summer workshop. However, the Field and Pilot school ITs who did not attend were "veteran" Installation teachers who were previously trained in HEP. Many of them, therefore, attended only portions of the summer workshop.

The average number of years in elementary school teaching experience for Field school 3-on-2 teachers was 7.5, while for the self-contained it was 10.0 years. Similarly, the average number of years teaching experience of Pilot school 3-on-2 teachers was 6.5 years experience while in the self-contained it was 2.0 years. In Installation classrooms, 3-on-2 teachers had 8.7 years experience while in the self-contained it was 12.8 years.

Among Installation teachers, the average number of elementary school teaching experience was 15.5 years for Field school Installation teachers, 9.0 years for Pilot school, and 10.8 years for Installation school ITs. One Installation school IT had no elementary school teaching experience.

The average number of elementary school teaching experience among principals was 5.2 years for Field schools, 12.2 years for Pilot schools and 8.1 years for Installation schools. One Pilot and four Installation school principals had no elementary school teaching experience.

With regard to teaching experience with the HEP program, 42% of the Field school 3-on-2 teachers responding completed their first year with HEP in 1970-71, 29% had two years experience, 21% had three years experience, and one teacher had four years of experience. For the self-contained teachers, one teacher completed her first year while the other completed her third year. In Pilot schools, the figures for 3-on-2 teachers were: two of the teachers responding completed their first year, while 87% of those responding completed their second year in 1970-71. Only two of the four self-contained teachers responded. Of the two, one had one year and the other two years of experience with HEP. In Installation schools, only one of the 48 teachers responding in the 3-on-2 classrooms had two years of experience. All of the others who responded (90%), in both 3-on-2 and self-contained classes, completed their first year in 1970-71.

In terms of professional training, 33% of the Field school teachers in 3-on-2 classrooms had only Bachelors' degrees. All others had degrees, equivalent to five years of professional training (e.g. Masters degrees, Professional's Certificates, 5th year diplomas, etc.). In Pilot schools, 26% of the 3-on-2 teachers had Bachelor's degree, while the rest had five years of training. In self-contained classes, only one of the two teachers responding had a Bachelor's degree, while the other had five years of schooling. In Installation schools, 17% of the 3-on-2 teachers responding had Bachelors' degrees, while 81% had five years of training. One 3-on-2 teacher had a doctorate. In self-contained classrooms, 26% had Bachelors' degrees, while the remaining 74% had five years of schooling.

All nine of the Field and Pilot school Installation teachers had a minimum of five years of professional training, whereas 14% of the ITs in Installation schools who responded had Bachelors degrees. The remaining 86% of the ITs responding had degrees equivalent to five years of training.

All but one of the 86% of Installation school principals who responded had five or more years of training. The one principal who did not, had a Bachelor's degree.

Table 9 reports the data on the sample professional groups.

M. Description of the Test Administrators

The pretesting of the sample population was conducted in October, 1970. The Installation teachers, described in the previous section, were called upon to administer the pretests. Training sessions, lasting between three-four hours, were conducted by the HEP evaluation staff to discuss testing procedures.

For the post-testing in April and May, 1971, thirty-eight data collectors were hired on a short-term basis to administor the tests. Of the thirty-eight test administrators, two were teacher aides funded under Title III; thirteen were substitute teachers; four had data collection experience with the HEP program in Field and Pilot schools; one was employed as a regular data collector with the HEP evaluation department; two were graduate students with elementary school practice teaching experience (one was also a substitute teacher and also worked as a data collector with the HEP evaluation department); two were regular elementary school teachers on maternity leave from the DOE; and one was a retired DOE elementary school teacher. The remaining 13 data collectors all had experience working at the school level as parent volunteers.

See Appendix 9 for the list of data collectors and schools assigned.

N. Outcome Variables

The Hawaii English Program, as an innovative, individualized program, assumes that a child will enter a particular component only after it has been established that he needs it and is considered ready to learn it. Once he enters a particular area, he is allowed to progress at his own

Table 9. Background Data on HEP Sample Professional Personnel

	Classroom Teachers						Inst. Tchrs.			Principals		
	Field		Pilot		Inst.							
	3/2	SC	3/2	SC	3/2	SC	F	P	I	F	P	I
1. Total Sample**	15	2	23	4	54	19	3	7	43	2	7	33
2. Number attending HEP Workshop	9*	1*	16*	1*	39	16	0*	11*	36	-	-	-
3. Yrs. of Elem. Tchng. Experience***												
0 yr.									1		1	4
1 yr.	3		1	1	6	0					1	1
2-5 yrs.	3		10	1	9	2		1	4	1	1	8
6-10 yrs.	5	1	4		17	3		3	17	1	1	7
11-15 yrs.	1	1	5		8	7	1	3	7			2
16-20 yrs.	2		2		4	5	1		7			3
21-25 yrs.					4	1			1			1
26-30 yrs.									1			
31-35 yrs.												
36-40 yrs.											1	
4. Yrs. of Experience Tchng. HEP***												
1 yr.	6	1	2	1	47	19						
2 yrs.	4		13	1	1							
3 yrs.	3	1										
4 yrs.	1											
5. Highest attained Degree												
Bachelor's Degree	5		6	1	8	5			5			1
Master's, 5th Yr., PC	10	2	17	1	38	14	2	7	32	2	5	28
Doctorate					1							

* Some of the Field and Pilot classroom and Installation teachers received training in previous years and therefore did not attend all portions of the workshops.

** Remaining totals represents only those responding to the item.

*** Includes the 1970-71 School Year.

rate toward higher-level objectives. Thus, a wide variance of achievement is expected. Perhaps the most meaningful way to assess such an individualized instructional program, therefore, is to measure the extent to which performance or behavioral objectives have been achieved. For such a program, then, the only valid method of evaluation is through the use of such a strategy. For example, the traditional elementary school language arts curriculum does not include a typewriting component; comparison between experimental and control groups in this skills area would thus be meaningless.

Despite this awareness for developing evaluation strategies for innovative, individualized instructional programs based on performance criterion-referenced measures, there is the practical need to provide information to educational decision-makers that they can use and interpret more meaningfully to the school public. For this reason, and for reasons elaborated earlier in the evaluation design section, the design to evaluate the new English curriculum was based on a "quasi-experimental" approach.

The sections that follow are divided according to the four major language skills strands (e.g. reading, writing, listening and speaking), with descriptions of the results of measuring techniques used to assess achievement in each. In addition, the findings on related and inherent facets of the new curriculum (e.g. self-direction) are also described.

1. Reading

a. Number of Books Ready by HEP and Non-HEP Pupils

A primary concern of the HEP Language Skills subprogram is the ability to read. To evaluate the impact of the total HEP program and this skill in particular, the evaluation staff developed an evaluation design which included several measuring devices. Among these were standardized tests and HEP-developed instrumentation. One device used to assess pupils' reading ability was to determine the amount of reading activity performed in the classroom. It was assumed that one of the indicators of reading ability is the number of books read by individual pupils in the classroom.

Based on this assumption, evaluation procedures were carried out to compare the sample HEP and non-HEP pupils with regard to the number of books read in the classroom. Data were collected from teacher record books in May, 1971, for all grades K-3 sample pupils in the study (both experimental and control groups). Only books used as part of the regular reading program (e.g. basal textbooks) were tabulated.

A total of 839 grades K-3 students were involved in this phase of the evaluation--518 in the experimental group and 321 in the control. The bulk of the experimental group consisted of grades K and 1 pupils who were in the program for the first time in Installation schools. Table 10 represents the number of students involved in the survey by grade level and type of school and the total number and range of books read by each group. Table 11 shows the percentage of books read by all sample students involved

Table 10. Books Read by HEP and Non-HEP Pupils

Grade	Type of School	No. of Students	Total No. of Books Read	Range		Average Number of Books Read	
				Low	High	By No. of Pupils Reading Books	By Total Number of Pupils
K	Field	19	27	0	27	27.0	1.4
	Pilot	36	64	0	26	12.8	1.7
	Installation	228	633	0	78	12.9	2.7
	Control	116	61	0	4	1.4	.5
1	Field	19	164	0	53	13.6	8.6
	Pilot	37	421	0	81	19.1	11.3
	Installation	108	952	0	64	14.4	8.8
	Control	114	320	0	52	3.9	2.8
2	Field	21	666	1	74	31.7	31.7
	Pilot	18	923	0	110	65.9	51.2
	Control	53	125	0	8	2.9	2.3
3	Field	26	1503	1	114	57.8	57.8
	Pilot	5	242	0	72	48.4	48.4
	Control	36	105	0	8	4.3	2.8
Total	Field	85	2360	0	114	39.3	27.7
	Pilot	96	1650	0	110	35.8	17.2
	Installation	336	1585	0	78	13.7	4.7
	Control	319	611	0	52	3.2	1.9

Table 11. Percentage of Pupils on Books Read

Range of Books Read	Kindergarten				First Grade				Second Grade			Third Grade		
	F	P	I	C	F	P	I	C	F	P	C	F	P	C
0	94.7	86.1	78.5	62.9	36.8	40.5	38.8	28.9	0	22.2	20.7	0	16.6	36.8
1-10		5.5	14.9	37.0	36.8	27.0	29.6	68.4	19.0	5.5	79.2	3.8		63.1
11-20		5.5	3.0		15.7	13.5	17.5	.8	9.5	5.5		19.2	33.3	
21-30	5.2	2.7	1.7			2.7	6.4		33.3	5.5		11.5		
31-40						8.1	1.8	.8	9.5	5.5				
41-50					5.2	5.4	2.7		4.7			19.2		
51-60		2.7			5.2		.9	.8	9.5	1.6		7.6		
61-70		2.7					1.8		4.7			7.6	33.3	
71-80		5.5							9.5	5.5			16.6	
81-90						2.7				11.1				
91-100												3.8		
101-110										22.2		11.5		
111-120												15.3*		

* Maximum read was 114 books.

by grade level, type of school, and class intervals. Analysis of the data in Table 10 reveals that third graders in Field schools, who have been in the program the longest, read the most books on the average and in terms of total range. Four HEP pupils read a total of 114 books, while all sample HEP third graders read a minimum of one book during 1970-71. Pilot school third graders similarly had a conspicuously higher average and total number of books read than their counterparts in control schools.

Among second graders, Pilot school pupils had the best performances. One pupil read a total of 110 books. The data further reveals that all sample Field school students also read a minimum of one book during the year.

The fact that all sample Field school second and third grade pupils read a minimum of one book during the school year provides favorable support for the HEP reading program--particularly in light of their ability levels, as described earlier in this report. Not only were the IQ means of sample Field school second and third graders considerably lower than the State norms but they were well below the control school means as well.

There were no major differences in the average number of books read by first graders in the three experimental groups, but Pilot school pupils held a mild advantage.

A breakdown of the data on kindergarteners further reveals that Installations school pupils made the best showing overall, with one youngster reading a total of 78 books in his first year of exposure to the HEP program and to formal schooling.

Overall, the experimental groups (Field, Pilot, and Installation) read a total of 5,595 books during the school year. Although the total sample size for the experimental group was 518, only 221 of them were actually involved in the reading of these books. The average number of books read by these 221 kindergarten, first, second, and third graders was over 25.

The disparity between HEP and non-HEP pupils in books read is further elaborated by the results shown in Table 11. Except for three non-HEP first grade students, all non-HEP sample children read no more than ten books during 1970-71. On the other hand, many of the HEP sample pupils from kindergarten on through third grade read a large number of books.

The data further reveals that among kindergarteners, most of the children did not read books at all, although the percentage of pupils in control classes was lower. Among first graders, between one-third to two-fifths of the pupils did not read books, with control children again showing a lower percentage.

The "multiplier effect" of the HEP Language Skills subprogram begins to surface when looking at the findings for second and third graders. Whereas kindergarteners and first graders in their first year of HEP show only a moderate advantage with regard to books read (except for a few pupils who seem to have been capable of taking full advantage of the individualized, unrestrained HEP learning environment), second and third graders in HEP classrooms appeared to have fully utilized their instructional reading program. The results show that the majority of control pupils at both grade levels read between one to ten books, whereas the number of books read by their HEP counterparts ranged from 1 to 114.

It should be pointed out that the above data are valid and meaningful only to the extent that the books read by both HEP and non-HEP pupils were comparable. To this end, it may be stated that many of the books read by both sample groups were the same. Additionally, most of the books fell within the range of from 60 to 100 pages.

It should be further noted that the greater difference between the lowest and highest number of books read among HEP pupils is indicative of the individualized nature of the program. Although the traditional procedures in control classrooms provide for some individualization, most of them conduct their reading programs in small groups by reading ability levels.

In fairness to control classes, however, it should further be noted that in the traditional basal reader programs (e. g. Ginn Basic Readers, Scott-Foresman, Allyn and Bacon, SRA, etc.), the emphases are on reading for meaning, appreciation, and application. Their programs, therefore, encompass all of the language skills--vocabulary, sentence structure, spelling, comprehension, etc. Activities within the program to develop these skills include working in workbooks, laboratory reading kits, book reports, etc. The rate of moving from one textbook to another, therefore, is slower than in the HEP program.

The HEP reading program, on the other hand, approaches reading without particular emphases on comprehension, spelling, vocabulary, etc. Instead, these areas are treated separately or integrated through interaction with other subprograms within HEP (e.g. Purposeful Writing, Following Directions, Meaningful Communications, etc.). The rate of reading textbooks within the HEP program, therefore, is much faster.

The above differences in learning approaches between HEP and non-HEP reading programs may in part, therefore, account for the early advantages shown by non-HEP pupils at the kindergarten and first grade levels in terms of the number of pupils reading a minimum number of books, and for the disparity between second and third graders, favoring HEP pupils.

Finally, the large number of books read by HEP children is quite remarkable in view of the fact that these children had considerably less than the full school year to accomplish their reading activities.

b. Reading Diagnostic Stack

Another procedure used to assessthe reading achievement of pupils in the evaluation of the Language Skills subprogram was to administer the HEP-developed Reading Diagnostic Stack on a pretest/posttest schedule. Sample HEP and non-HEP pupils in kindergarten and first grade were pretested in September-October, 1970, and posttested in April-May, 1971. A total of 420 kindergartens were administered the pretest, while 395 took the posttest. For first graders, 274 were involved in the pretest, while 247 were administered the posttest.

The Diagnostic Stack is used as an integral part of the HEP Language Skills reading subprogram to initially diagnose the learners' needs for the HEP reading card stack, letter, and word discrimination, and numeral, letter, and word recognition programs. It is made up of eight sets of cards sequenced to help the classroom teacher find out whether a learner entering the HEP system can or cannot:

1. name on sight the numerals 1-30
2. name on sight the upper-case letters (big letters),
3. name on sight the lower-case letters(small letters), and
4. recognize words,

and whether he needs to learn to:

1. discriminate between big letter shapes,
2. discriminate between small letter shapes,
3. discriminate between word shapes, and
4. discriminate between word shapes, and name words.

The diagnostic stack is used by presenting selected samplings from eight stack-bound card components, using 107 cards. Directions for the diagnostician are printed on the back of selected teaching cards (See Table 12 for description of each of the tasks required).

For the pretest, sample students were diagnosed into three categories for each Skills subprogram: Needing, Not Needing, and Not Administered. The Needing category indicated that the student was diagnosed as needing that particular subprogram, whereas Not Needing signified that the pupil was diagnosed as not needing the subprogram. Not Administered indicated that the diagnosis from earlier subprograms revealed that the student could not handle the advanced work and therefore no further diagnosis was needed. The latter category, therefore, was also tabulated as Needing.

The posttest required the diagnostician to classify pupils into only two categories: Needing and Not Needing. The Not Administered category was incorporated into Not Needing for the reasons described above.

Table 12. Description of Tasks Required in the Reading Diagnostic Stack

Symbol	Task required*
NI	To name on sight the numerals 6, 9, 11, 13, and 24
BL	To name on sight the big letters (upper case) B, E, I, L, N, S, W, M, T, and P
YNI	To discriminate between the big letter (upper case) shapes I-I, O-I, E-B, B-B, M-N, M-W, C-U, G-G, E-F, and Q-Q
SL	To name on sight the small letters b, k, d, e, c, n, p, y, t, and h
YN2	To discriminate between the small letter (lower case) shapes, l-l, o-i, r-r, r-n, n-s, n-u, b-b, b-p, b-d, and d-d
W	To recognize and produce orally the words cat, man, had, tan and dad
PC	To discriminate between and name the following words: mad-sad, ham-hat, and bed-bud
YN3	To discriminate between the word shapes win-win, oat-cat, bat-pat, big-big, sin-sit, sit-sit rid-rip, hot-hot, sat-set, saw-was, and bud-dub
Instructional Library 1, 2, 4, 7, and 10	To be able on second reading to read the first and last pages of any book in each level, beginning at Level I at 100% accuracy

* The diagnostic stack is organized in a somewhat sequential order of difficulty. That is, inability to complete the tasks required in a particular subprogram (e.g. YN2) would indicate that the pupil is unable to complete all other subprograms following. Each subprogram requires specific tasks, and directions are on cards at specific intervals in each subprogram, instructing the diagnostician to continue or stop.

Results of the pre- and post-test diagnosis are shown in Appendix 10. The findings reveal that for kindergarteners, over three-fourths or more of the sample pupils were diagnosed as needing each of the thirteen reading subgroups of tasks being tested with the diagnostic stack. In the case of the Instructional Library (Levels 1, 2, 4, 7, and 10), almost all of the sample pupils were not capable of reading at the beginning of the school year.

The two groups of tasks that many sample kindergarteners were able to complete at the end of the year included the ability to visually discriminate big letter shapes (upper case, YN1) and the ability to visually discriminate small letter shapes (lower case, YN2). More Field school children, however, were diagnosed as needing these two areas of skills during the pretest when compared to the other children, and therefore their rate of growth was considerably higher at the end of the year.

The findings on kindergarten children, therefore, suggest that these sample pupils initially began their first year of schooling generally on the same footing. That is, aside from the abilities to discriminate big letter and small letter shapes, the sample kindergarteners generally did not have the ability to perform many tasks required for reading.

The posttest data, on the other hand, reveal that aside from the W and Instructional Library categories, one-half or more of the sample kindergarteners in the HEP classrooms were able to complete the tasks required. In terms of the YN1 and YN2 skills, almost all HEP sample children were able to exit from these two skills areas. Non-HEP pupils also performed as well in the YN1 tasks, although there were slightly more children needing this grouping of skills at the end of the year than when all sample HEP children were combined.

Over three-fourths of all kindergarten children had difficulty in recognizing and orally reproducing selected words (W program), and more than 80% of the sample children were still not able to read books at any level at the end of the first year of schooling.

The greatest gains made by HEP pupils were in the N1 (Installation); YN1 (Field), YN2 (Field and Installation), PC (Installation) and YN3 (Installation) skills--that is, a greater percentage of pupils who were originally diagnosed as needing these skills were diagnosed as not needing the skills at the end of the year. Among non-HEP kindergarteners, the greatest changes occurred in the B1, YN1, YN2, and YN3 skills.

Overall, there were less kindergarten children in sample HEP than non-HEP classes who were diagnosed as needing specific reading skills in each of the skills areas (12 out of 13) at the end of the school year. The most notable differences were in N1, SL, PC, and YN3.

The rate of progress made by kindergarteners generally reflects the expectations based on the ability levels of the pupils from the four types of schools under study. That is, sample children from Pilot and Installation schools, who generally had higher capabilities, did in fact perform mildly better than those from Field and Control schools.

In contrast to kindergarteners, the pretest results show that many of the sample first graders were diagnosed as being able to perform reading tasks in skills leading to the Instructional Library. Field and Pilot school first graders, who had had one year of HEP experience, performed particularly well as contrasted to first graders in Installation schools, who were just beginning their first year in HEP, and first graders in non-HEP control schools.

When comparisons between HEP and non-HEP pupils were made, the pretest data show that non-HEP children were diagnosed as Needing in more specific reading skills than their HEP counterpart. HEP students performer better in nine of the thriteen subgroups of skills, although the differences were relatively small.

Performances on the pretest in the Instructional Library were generally poor, beginning with Level 2. Field and Pilot school pupils performed somewhat better than the other two groups of children, but overall over 95% of all sample first graders were not able to complete the reading tasks required in the Instructional Library subgroupings.

The posttest data on first graders show that in the eight skills subgroups leading to the Instructional Library, there were little differences between HEP and non-HEP sample children. In four of the eight skills areas (BL, YN1, YN2, and YN3), nearly all of the pupils were able to complete the skills tasks required at the end of the year. Of the remaining four skills areas, about one-half of all sample first graders were still unable to complete the tasks required in the W skills area. The only notable difference among the eight skills areas in the diagnostic stack was in the PC subgroup. Less HEP pupils were diagnosed as needing this latter group of skills.

Among HEP first graders, the greatest gains were made primarily by Installation school pupils, particularly because they were initially diagnosed as Needing more skills than the Field and Pilot children during the pretest. Significant gains were made in N1 (Installation and Pilot), BL (Installation), SL (Installation), W (Installation), PC (Installation), YN3 (Installation), Instructional Library 1 (Installation), and Instructional Library 2 (Installation and Field). Among non-HEP pupils, major gains were made in all of the above listed skills areas except in Instructional Library 2.

HEP pupils made major gains in the first two Instructional Library levels while less significant progress was made in the remaining three. Control pupils, on the other hand, made a moderate gain in Instructional Library Level 1 and mild growth in the remaining four. However, one-half or more of all sample pupils still were diagnosed as Needing in the Instructional Library levels.

The foregoing data on kindergarteners and first graders provide some insights into the nature of the HEP and non-HEP language skills reading programs. The similarities in gains made by HEP and non-HEP kindergarteners in discriminating big and small letters, and in naming upper case letters, are indicative of the emphases stressed in these areas in the HEP program and many non-HEP language skills programs. The more favorable gains made by HEP pupils reflect the variety of learning options available to pupils in the classroom and the reinforcing nature of the learning process itself (e.g. peer-tutoring/checking, teacher tutoring/checking, multi-modal opportunities, etc.). The latter contention is particularly supported by the differences between HEP and non-HEP pupils in the N1, SL, PC, and YN3 skills areas.

Although many of the kindergarteners were still not able to read textbooks at the end of the school year, the significant differences between HEP and non-HEP children in Instructional Library Levels 1 and 2 support the HEP reading program philosophy of an early introduction to reading books for children who are capable. The non-HEP program, on the other hand, stresses readiness-to-read activities at the kindergarten level, thereby accounting for the gains made in skills areas prior to the actual reading of books.

The data on first graders provide additional insights about the two language skills programs under study. The small number of students diagnosed as Needing skill areas prior to the reading of books during the pretest support the earlier assumption that first graders in both reading programs receive formal training in mastering pre-reading skills during kindergarten. The gains made by control school pupils in the eight areas prior to the Instructional Library reflect the more intensified emphases put in mastering these skills during first grade in non-HEP language skills programs.

Furthermore, the gains made by Installation school first graders reflect the nature of the HEP implementation schedule. Installation school pupils were in their initial entry to HEP (both kindergarteners and first graders), thereby suggesting that the multi-modal learning approach of the HEP Skills subprogram provided additional reinforcement in mastering skills previously learned during their non-HEP kindergarten school experience. Most Field and Pilot school first graders, on the other hand, were in their second year of HEP and therefore the ratio of the gains made were somewhat smaller. In addition, the individualized, self-motivating learning environment on the HEP program does not require children to progress at the same pace. The greater dispersion of pupils in skills mastered, therefore, would logically be among HEP first graders rather than among non-HEP pupil.

Two additional points should be noted. First the moderate gains made by control school first graders in the upper levels of the Instructional Library suggest that some degree of individualization of learning occurred in non-HEP classrooms. Secondly, the gains made by non-HEP pupils in the upper Instructional Library skills areas appear to reflect the nature of learning approach in reading. The reading program in the conventional classroom generally involves concentrated effort in decoding, comprehension, and application. These are usually accomplished through workbooks, worksheets, programmed reading kits, etc. in addition to the reading of basal textbooks. In HEP, on the other hand, comprehension and application in reading is generally introduced in the more advanced levels of the Instructional Library subprogram (usually entered by children in the second and third grade), and are integrated with many of the other skills subprograms (e.g. Writing program). As a consequence, a more complete mastery of reading skills may not surface until the children enter the more advanced levels of the HEP grades K-3 Language Skills package.

The overall performance of HEP children at both grade levels, particularly where they scored more favorably than non-HEP pupils, are especially noteworthy in light of the late delivery of the HEP programs to classrooms and the problems associated with the defective materials. In many instances HEP children did as well as or exceeded progress made by non-HEP students despite the fact that entry into the various skills areas was delayed by three to four months and further compounded by materials which sometimes failed to stand up under normal classroom wear and tear.

c. Gates MacGinitie Reading Tests

One of the specific goals of the Hawaii English Program Language Skills subprogram is the development of skills in reading. This fundamental goal involves a synthesized control of language where the mastery of reading, combined with the mastery of listening, speaking and writing skills, assists the learner to communicate and learn both in and out of school.

One of the procedures used to measure the effects of the HEP reading program was to administer the Gates-MacGinitie Reading Tests, Form 2, Primary B and C, to the sample pupils used in the evaluation of the Hawaii English Program. Pre- and post-test measures were administered in October and April-May respectively to 75 second graders, and 57 third graders. Primary B was administered to second graders, while Primary C was administered to third graders.

The Gates-MacGinitie Reading Tests are nationally standardized reading tests, designed in a series to cover grades K through

12. Primary B is designed for grade 2 pupils and Primary C for grade 3 children. The tests for both grade levels consists of two parts: Vocabulary and Comprehension. The Primary B Vocabulary test contains 48 terms, while the Comprehension test has 34. The Primary C Vocabulary test consists of 52 items and the Comprehension portion contains 24, with two questions per item. Both tests are scored by tallying the correct response for each item and awarding one point to each. Thus the maximum number of points for the test are: Primary B--Voacbulary 48 and Comprehension 34; Primary C--Vocabulary 52 and Comprehension 48.

The analyses on the results of the tests were in two parts. For second graders, total raw score means were tabulated for each of the two subtests by type of school. For third graders, means were computed in terms of experimental/control groups.

After the initial computations were made, as described above, raw score means for both subtests were stratified into ability subgroupings. For second grade scores, three ability subgroupings were used while for third graders only two subgroupings were used.

In both instances, comparisons were made by adjusting mean scores, using SES, IQ and pretest scores as covariate variables. Table 13 reports the raw score tabulations, while Table 14 similarly reports the findings for the stratified subgroupings.

Table 13. Raw Score Means of HEP and Non-HEP Pupils on the Gates-MacGinitie Reading Tests

	Second Grade			Third Grade	
	Pilot	Field	Control	HEP	Non-HEP
Vocabulary:					
N	12	19	44	25	32
T-Mean	27.83	21.26	30.55	23.88	31.97
Adjusted Mean	26.01	25.74	29.12	28.45	28.40
F-Value		1.713 (NS)		.001 (NS)	
Comprehension:					
N	12	19	40	23	32
T-Mean	17.83	13.74	18.38	21.04	24.91
Adjusted Mean	18.61	15.58	17.26	25.86	21.45
F-Value		.998 (NS)		3.973 (NS)	

NS: No significant differences among groups at the .05 level.

Table 14. Comparisons of HEP and Non-HEP Pupils on the Gates-MacGinitie Reading Tests by Ability Groupings

	Second Grade		Third Grade	
	HEP	Non-HEP	HEP	Non-HEP
Vocabulary: High Group				
N	4	20	5	20
T-Mean	29.50	37.05	20.60	37.40
Adjusted Mean	32.51	36.45	27.77	35.61
F-Value	1.245 (NS)		4.593*	
Medium Group				
N	15	16		
T-Mean	22.93	26.81		
Adjusted Mean	22.84	26.90		
F-Value	2.533 (NS)			
Low Group				
N	10	8	20	12
T-Mean	20.70	21.75	24.70	22.92
Adjusted Mean	20.11	22.49	25.22	22.05
F-Value	.385 (NS)		2.138 (NS)	
Comprehension: High Group				
N	4	19	4	20
T-Mean	17.00	23.11	18.25	30.30
Adjusted Mean	21.06	22.25	29.62	28.03
F-Value	.097 (NS)		.129 (NS)	
Medium Group				
N	15	14		
T-Mean	15.27	15.50		
Adjusted Mean	14.73	16.08		
F-Value	.306 (NS)			
Low Group				
N	10	7	19	12
T-Mean	13.80	11.29	21.63	15.92
Adjusted Mean	13.06	12.35	21.49	16.14
F-Value	.040 (NS)		3.848 (NS)	

NS No significant differences between groups at the .05 level
* $p < .05$

The results shown in Table 13 reveal that there were no significant differences at the .05 level between groups for both grade levels. Third graders in HEP classrooms scored consistently higher in vocabulary and comprehension, whereas for second graders, Pilot school children held a mild advantage.

The findings in Table 14 reveal a somewhat similar pattern when comparisons were made between subgroups by ability. Second graders in all three ability subgroups from non-HEP classrooms scored consistently higher than their HEP counterparts, except in comprehension between the low ability children, while third graders in HEP schools scored higher in both subgroups in comprehension and in the low ability subgroup in vocabulary. However, no significant differences between groups were noted at the .05 level in any of these comparisons. The comparisons between third grade high ability pupils in vocabulary, on the other hand, revealed a significant difference at the .05 level, favoring non-HEP children.

The performances of the sample HEP third graders, particularly the low ability pupils, are noteworthy in that their overall capabilities, as measured by the CTMM, are lower than those of their non-HEP counterparts. Further investigation of the range of scores within each group reveals more substantial disparities between the two groups. The range of IQ scores for the low control group was from 85 to 100, whereas the HEP group had a range from 49 to 100. Similarly, the differences between the high ability group were: 103-121 for the non-HEP and 102-112 for the HEP pupils. The moderately higher scores in vocabulary and comprehension, therefore, represent significant findings in favor of the HEP reading program.

The performances of the second and third graders on the Gates-MacGinitie tests are, in part, also a reflection of the nature of the reading programs in HEP and non-HEP classrooms. The HEP reading program approaches reading without particular emphases on comprehension, spelling, vocabulary, etc. Instead, mastery of these skills is integrated through interaction with other subprograms within HEP (e.g. Purposeful Writing, Following Directions, Meaningful Communications, etc.) as the child progresses upward toward the more advanced levels of the reading program, and as he advances to the upper grade levels. In addition, the individualized learning environment inherent to the HEP Language Skills subprogram does not require students to complete reading tasks at a predetermined rate. Instead, they are permitted to pursue activities, particularly those related to pre-reading tasks, at their own pace. Mastery of reading skills, therefore, may not necessarily be accomplished by some children until the child enters the second or third grades.

In contrast, the traditional programs in non-HEP classrooms begin an intensified program in reading for all children, in most instances, at the beginning of first grade and develops into a more concentrated effort as the child progresses toward the upper grade levels. The major emphases in these conventional reading programs are in reading for meaning, appreciation, and application. Their programs, therefore, encompasses all of the language skills--vocabulary, sentence structure, spelling, comprehension, etc.--as the child progresses from one basal reader to another. Mastery of these skills, as a consequence, is more complete at the outset than in the HEP programs. It is through the "multiplier effects" of the total HEP program, experienced as the child progresses toward the upper grades and programs, that the pupil in the HEP program manages to accelerate his mastery of the language skills.

The favorable achievement gains made by the HEP low ability children, third graders in both comprehension and vocabulary and second graders in comprehension, dispell the assumptions held by many classroom teachers new to the program that the Skills reading subprogram is beneficial primarily for high ability students, and that the program fails to teach comprehension in reading (See Interview comments elsewhere in this report). On the contrary, the reading program in the HEP Language Skills subprogram appears to more adequately meet the needs of pupils categorized as low in ability, and in the area of reading comprehension, when compared to pupils in other non-HEP language arts programs.

2. Writing

a. Handwriting Exercise

The Language Skills subprogram of the Hawaii English Program includes a writing component which provides for instruction in handwriting skills. Unlike the traditional handwriting instructional programs, where the child is first introduced into manuscript writing and then cursive writing, the HEP program introduces the development of handwriting skills with cursive writing. Manuscript writing in the HEP is introduced to pupils as an alternative option for those who are unable to succeed in cursive writing, or to those who have successfully completed all of the cursive writing requirements.

To assess the effects of the HEP handwriting program, sample first, second, and third grade children were administered pre- and post-tests in October and April-May respectively. Involved in this aspect of the evaluation were 201 first graders, 70 second graders, and 57 third graders. Kindergarteners were not involved in this study because handwriting is not generally introduced in non-HEP language arts programs at this grade level. It should be noted, however, that pupils in the HEP program do have the opportunity to enter this skills development program at the kindergarten level.

The handwriting test used for this study was an HEP-developed exercise which consisted of two sections. The first section required the pupil to copy in manuscript a sentence written in typescript, copy in cursive script a sentence written in cursive script, and transcribe a sentence written in manuscript into cursive script. The second section required the student to listen to a sentence read by the test administrator, and to write the sentence in cursive script or manuscript.

Each of the four test items carried a maximum of eight points. Points were awarded for each word that was written as directed (e.g. manuscript or cursive), written in clearly recognizable form, and spelled correctly. Maximum points awarded for the entire test was 32 points.

The raw score means were computed for each grade level and stratified into subgroups for comparison purposes. Seven subgroups were used for first graders, dividing scores by type of school and classroom organization. Three groups were used for second graders--stratification being by type of school. Because of the small sample size, third grade scores were divided into two groups: HEP and non-HEP. Means were adjusted, using SES, pretest, and IQ scores as covariate variables. Table 15 reports the findings.

Table 15. Raw Score Means of HEP and Non-HEP Pupils on the Handwriting Test

Type of School/ Classroom Organization		N	T-Means	Adjusted Means	F-Value
First Grade:					1.626 (NS)
Installation	3/2	71	17.68	17.80	
Installation	SC	14	17.36	17.44	
Pilot	3/2	12	19.25	18.15	
Pilot	SC	16	14.38	14.70	
Field 3/2 and	SC	15	19.40	17.83	
Control	3/2	29	15.03	15.62	
Control	SC	44	16.50	16.60	
Second Grade:					2.212 (NS)
Pilot		11	23.00	22.65	
Field		18	25.22	26.54	
Control		41	24.51	24.03	
Third Grade:					2.541 (NS)
HEP		27	26.96	26.87	
Non-HEP		30	28.40	28.48	

NS No significant differences among groups at the .05 level

The results from the foregoing table reveal that there were no significant differences at the .05 level among the various subgrouping for each of the three grade levels. Among first graders, HEP pupils from all but the self-contained classrooms in Pilot schools had higher scores than control students. Among HEP pupils, children in three-on-two classrooms performed better than their counterparts in self-contained settings. Among non-HEP pupils, however, the reverse was true. It was also interesting to note that pupils in Pilot school three-on-two classrooms had the highest mean scores among all subgroups, while those in self-contained rooms, also in Pilot schools, had the lowest.

The analyses on second graders reveal that although there were no significant differences at the .05 level between groups, Field school pupils had the higher scores while Pilot school children had the lowest. Among third graders, the non-HEP pupils had a slight edge on the mean scores.

To assess the effects of the handwriting program on the different ability levels, raw score means were stratified into three subgroupings for first and second graders, and into two subgroups for third graders. Comparisons were made by combining all HEP students (Installation, Pilot, and Field school) into one subgroup and all non-HEP students into another, by grade levels. Mean scores were adjusted by using SES and pretest scores as covariates. Results of the computations are shown in Table 16.

Table 16. Comparisons Between HEP and Non-HEP Pupils By Ability Groupings on the Handwriting Test

		HEP	Non-HEP	F-Value
First Grade:	High Group			
N		37	27	
T-Mean		19.38	18.44	
Adjusted Mean		19.17	18.73	.180 (NS)
	Medium Group			
N		52	24	
T-Mean		17.75	15.92	
Adjusted Mean		17.34	16.81	.177 (NS)
	Low Group			
N		36	22	
T-Mean		15.64	12.82	
Adjusted Mean		15.72	12.69	5.549*
Second Grade:	High Group			
N		3	20	
T-Mean		28.67	27.55	
Adjusted Mean		28.19	27.62	.034(NS)
	Medium Group			
N		14	13	
T-Mean		24.36	23.15	
Adjusted Mean		23.98	23.56	.028(NS)
	Low Group			
N		10	8	
T-Mean		22.30	19.13	
Adjusted Mean		22.09	19.39	1.002 (NS)
Third Grade:	High Group			
N		7	19	
T-Mean		25.14	29.32	
Adjusted Mean		26.63	28.77	2.484 (NS)
	Low Group			
N		20	11	
T-Mean		27.60	26.82	
Adjusted Mean		26.87	28.15	.785 (NS)

NS No Significant differences among groups at the .05 level

* $p < .05$

The analyses on test results between the different ability levels reveal that HEP first and second graders scored consistently higher than their non-HEP counterparts in all three ability subgroupings. Significant differences at the .05 level, however, were only noted between pupils in the first grade low subgroups.

Between third graders, the reverse was true. Non-HEP pupils in both ability subgroups had higher scores than HEP children, although no significant differences were noted at the .05 level.

The differences in scores between groups of the three grade levels may, in part, be a function of the handwriting instructional programs offered in HEP and non-HEP classrooms. Handwriting is introduced to children at the kindergarten grade level in the HEP. The majority of HEP pupils at the kindergarten and first grade levels, and to a lesser degree at the second grade level, therefore, concentrate a good part of their effort in learning the handwriting skills. As the children progress through the various subprograms, including handwriting, and as they advance to the higher grades, the HEP writing program enters more complex and advanced arenas of learning (e.g. Purposeful Writing). As a consequence, very few third graders in the HEP remain in the handwriting program per se.

The non-HEP language skills program, in contrast, begins instruction in handwriting at grade one with manuscript writing. The major emphasis in manuscript writing, however, is conducted during grade two, and entry into cursive writing skills development is generally introduced in grade three. The differences in handwriting instruction between HEP and non-HEP programs, therefore, reflect the differences in emphasis and sequence. Whereas the pupil in HEP progresses from skills development at the kindergarten and first grade levels, to theme and content writing in the second and third grades, the child in the non-HEP program begins a more concentrated effort in the development of handwriting skills as he advances to the upper grade levels.

Furthermore, the findings of the comparative analyses conducted on the handwriting test results confirm, to some extent, the learning continuum of the HEP Writing program. That is, the less capable pupils spend a greater amount of their time in the skills areas assessed by the test, whereas the higher ability children, particularly those in the second and third grade levels, are in the process of exiting from the specific handwriting skills and are entering the more complex writing subprogram described earlier.

In addition, three factors that also may have influenced the performances of the HEP children on the handwriting test were the delays on the delivery of materials to classrooms, the differences in ability levels of the sample HEP and non-HEP children, and the problem of defective materials (particularly in the film loop mode). For first and second graders, the test scores shown in Table 16 reflect positive efforts of the HEP writing program in spite of the problems encountered. For third graders, the differences in program emphasis and sequence between the two language skills programs may have had some bearing on test performances.

3. Listening

One of the techniques used to assess the effects of the listening program in the Hawaii English Project Language Skills subprogram was to administer a taped listening exercise to sample kindergarten and first grade pupils, and the Cooperative Primary Listening Test to sample second and third graders. Kindergarteners were administered the posttest only in April-May, whereas the other three grade levels were administered pretests in October and posttests in April-May.

A total of 311 kindergarteners, 210 first graders, 71 second graders, and 59 third graders were involved in this phase of the evaluation study.

a. Taped Listening Exercise

The listening exercise consisted of a seven-minute tape, administered individually, instructing pupils to draw a specific figure. The children were instructed to select three different symbols from among six and to trace the symbols to form the specific figure. The tape was stopped at specific points by the test administrator while the children performed the tasks described on the tape. A total of eleven maximum points were awarded, one for each part of the directions that was properly performed.

Raw score means were computed for each of the seven sample subgroups of kindergarteners and first graders, by type of school and type of classroom organization. Because of the disparities between subgroups, IQ, SES, and pretest (except for kindergarteners) scores were used as covariates to adjust mean scores for both grade levels.

The findings shown in Table 17 reveal that there were no significant differences among the mean scores of the seven kindergarten subgroups at the .05 level. Sample pupils from self-contained classrooms in control schools had slightly higher scores among all groups, whereas pupils from three-on-two classrooms in Installation schools had the higher scores among HEP children.

Table 17. Raw Score Means on the Taped Listening Exercise

Type of School/ Classroom Organization		N	T-Mean	Adjusted Mean	F-Value
Kindergarten:					3.66 (NS)
Inst.	3/2	87	6.87	6.83	
Inst.	SC	101	6.83	6.79	
Pilot	3/2	14	5.64	5.63	
Pilot	SC	8	5.88	5.69	
Field	3/2 and SC	16	6.56	6.79	
Control	3/2	38	6.61	6.67	
Control	SC	47	6.83	6.92	
First Grade:					2.335*
Inst.	3/2	73	7.25	7.32	****
Inst.	SC	13	6.54	6.76	
Pilot	3/2	17	7.47	7.35	
Pilot	SC	16	6.81	6.65	
Field	3/2 and SC	12	7.08	7.36	
Control	3/2	31	6.16	5.94	****
Control	SC	48	6.85	6.85	

NS No significant differences between scores
* $p < .05$ among all seven groups
**** $p < .05$ between these two groups; $t = 3.63$

Among first graders, the initial analyses revealed that there were significant differences in mean scores between the seven subgroups. Subsequent analyses pointed out that the significant differences were between the Installation and control school pupils in three-on-two classrooms, favoring the HEP subgroup. First graders from three-on-two classrooms in all three types of HEP schools (Field*, Pilot, and Installation) had higher mean scores among all subgroups, while the sample pupils in control three-on-two had the lowest.

The lower scores achieved by sample self-contained classrooms can probably be attributed to the late delivery of the listening/speaking materials to schools. Over two-thirds of the program materials for self-contained classrooms were late in delivery to schools.

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*The Field school subgroup includes both three-on-two and self-contained because of the small sample size.

To determine the effects of the listening programs on kindergarteners and first graders between groups (HEP and non-HEP) by ability levels, scores of sample children were stratified into three ability subgroups. Mean scores were adjusted, using pretest and SES scores as covariates, for comparison purposes. In the case of kindergarteners, only SES scores were used as covariates.

Table 18. Comparisons Between HEP and Non-HEP Pupils on the Taped Listening Exercise by Ability Groupings

	HEP	Non-HEP	F-Value
Kindergarten: High Group			
N	71	20	
T-Mean	7.41	6.75	
Adjusted Mean	7.41	6.75	1.789 (NS)
Medium Group			
N	94	33	
T-Mean	6.43	7.79	
Adjusted Mean	6.44	7.74	1.589 (NS)
Low Group			
N	55	32	
T-Mean	6.56	5.63	
Adjusted Mean	6.56	5.63	4.561*
First Grade: High Group			
N	39	28	
T-Mean	8.18	6.46	
Adjusted Mean	8.17	6.48	13.725**
Medium Group			
N	49	29	
T-Mean	6.80	6.55	
Adjusted Mean	6.90	6.38	1.964 (NS)
Low Group			
N	41	22	
T-Mean	6.54	6.77	
Adjusted Mean	6.59	6.68	.026 (NS)

NS No significant differences at the .05 level
* $p < .05$
** $p < .01$

The findings, shown in Table 18, reveal that among the kindergarteners in the High and Medium groups, no significant differences were found at the .05 level. HEP students in the High subgroup, however, had mildly higher scores than non-HEP, whereas the reverse was true between the Medium subgroups. Between the Low ability pupils, however, significant differences were noted at the .05 level, favoring HEP children.

Between first grade subgroups, HEP pupils scored higher than non-HEP students in the High and Medium subgroups, while the reverse held true for the low subgroups. Significant differences in favor of HEP were noted between the high ability students at the .01 level. The scores between the other two ability subgroupings were only mildly different.

The results of the analyses between ability subgroups for both grade levels reflect significant gains made by HEP children, particularly when viewed in light of the late delivery of materials to HEP classrooms. The significant differences favoring HEP low ability kindergarteners and high ability first graders provide strong evidence in support of the HEP listening skills subprogram and further attest to the individualized nature of the total Skills subprogram.

b. Cooperative Primary Listening Test

The Cooperative Primary Listening Test, administered to sample second and third graders, is a nationally standardized test to assess listening comprehension, recall, and interpretation of the spoken word in everyday situations. The test contained 50 items and each correct response was awarded one point.

Table 19 reports the raw score means for the sample second and third graders. Mean scores for second graders were subgrouped into type of school, and into HEP/Non-HEP for third graders because of the small sample sizes. Means were adjusted by using pretest, SES, and IQ scores as covariates.

Table 19. Raw Score Means of HEP and Non-HEP Pupils on the Cooperative Primary Listening Test

Type of School	N	T-Mean	Adjusted Mean	F-Value
Second Grade:				.460 (NS)
Field	18	26.39	30.04	
Pilot	12	32.33	31.30	
Control	41	31.49	30.18	
Third Grade:				1.028 (NS)
HEP	27	29.26	32.25	
Non-HEP	32	36.22	33.69	

NS No significant differences at .05 level

The findings in the foregoing table reveal that there were no significant differences at the .05 level between groups for both grade levels. Sample Pilot school HEP children had the higher scores among second graders, while control pupils similarly had higher scores among third graders.

To assess the differences between groups by ability levels, scores of second graders were stratified into three subgroups and scores of third graders were divided into two subgroups. Mean scores were adjusted by using pretest and SES as covariate variables. Table 20 reports the results of the analyses made.

Table 20. Comparisons Between HEP and Non-HEP Pupils on the Cooperative Primary Listening Tests by Ability Groupings

		HEP	Non-HEP	F-Value
Second Grade:	High Group			
N		4	19	
T-Mean		36.25	37.16	
Adjusted Mean		36.09	37.19	.349 (NS)
	Medium Group			
N		13	14	
T-Mean		30.85	28.71	
Adjusted Mean		30.31	29.21	.374 (NS)
	Low Group			
N		11	8	
T-Mean		24.82	22.88	
Adjusted Mean		24.23	23.68	.066 (NS)
Third Grade:	High Group			
N		7	20	
T-Mean		32.14	39.50	
Adjusted Mean		35.48	38.33	1.742 (NS)
	Low Group			
N		20	12	
T-Mean		28.25	30.75	
Adjusted Mean		29.06	29.40	.035 (NS)

NS No significant differences at the .05 level

The findings, as shown in Table 20, indicate that there were no significant differences between groups for any of the ability subgroupings at both grade levels. Among second graders, the HEP Medium and Low ability children had mildly higher mean scores than non-HEP pupils, whereas control pupils had higher scores in the High ability subgroups. Among third graders, pupils in control classrooms had higher scores for both ability subgroupings.

Although the foregoing findings favored the non-HEP control pupils at the third grade level, the statistically non-significant differences between subgroups become noteworthy when viewed in relation to the intelligence levels of the sample children (as measured by the CTMM). At the third grade level, HEP pupils had somewhat lower IQ scores in both ability subgroupings then non-HEP children. The results on the listening test, therefore, suggest that the more advanced HEP listening skills curriculum tends to produce the "multiplier effects" previously enunciated, particularly with the lesser ability children.

The postulation described above is further supported by the fact that many of the listening/speaking program materials at the second and third grade levels were prototype and not installation materials. The accelerated installation of the total HEP program, mandated by the State Legislature, delayed the completion of the advanced materials for listening and speaking to the extent that children in Field and Pilot schools were able to utilize only revised versions of prototype materials. Many of the listening/speaking materials, therefore, were still in the process of being modified during the 1970-71 school year.

4. Speaking

a. Speaking Test

In the area of speaking skills, the evalution efforts were complicated by the absence of suitable instruments. Currently existing measures of speaking ability were found to be highly inappropriate--especially for kindergarten and first grade pupils whose reading ability level called for an essentially pictorial format. After a long search for appropriate instruments, it was decided that a modified version of the speech communication test developed by the Department of Speech Communication, University of Hawaii, should be suitable for use in the present evaluation study.

In its final form, which is entirely pictorial in format, the Speaking Test consisted of two sections--the first having 14 items (including 2 "practice" items) and the second four items. The 14 items in the first section presented drawings to which sounds of English words were attached. For example, to the picture of a mouth the English pronounciation of "MOUTH" was attached. The correspondence between pictures and words was kept as close as possible in terms of meaning. Each item consisted of five pictures in a row to which two English words of similar sounds were attached. The first 14 items were constructed to essentially test the pupils' ability to distinguish the difference between English phonemes. All sample grades K-3 children were administered the first section of the test.

Items in the second section of the test, which had two versions--one for kindergarten and first-grade pupils and the other for second and third grade pupils--consisted of pictures (e.g. a garden) or configurations (e.g. an arrow). In this section of the test, the kindergarten and first grade pupils were required to give instructions to another pupil so that the latter could complete an incomplete picture. The second and third grade pupils were likewise required to instruct another pupil to draw lines or curves to complete an incomplete configuration. As is obvious, the emphasis in this section of the test was on pupils' ability to communicate with their peers in performing a specific task.

Both section of the test had two forms--Form A and Form B. In section one, Form A differed from Form B in that the order of the picture was different. In section two, only one of the forms had the complete picture or configuration, depending on whether the item number was odd or even.

During the test session, the words attached to pictures were first read out by teachers. The pupils, seated in two rows facing each other, rotated to serve as the talker (who repeated the words according to the order of pictures on his test paper) and the listener (who put an X on pictures not in the same order as the talker's). Section two of the test followed the same procedure except that the talker, who had the complete picture or configuration on his test paper, gave instructions to the listener so that the latter could complete the picture or configuration.

Although time limits were strictly observed, ample time was give for pupils to finish the test. The approximate time length for each test session was 45 minutes.

In scoring the test, points were assigned on the basis of the listener's performance--whether or not he put the X's on the "correct" pictures in section one and completed the pictures or configurations in section two. The number of points earned for each round was also awarded to the listener's partner (the talker) for that round. Two numbers, corresponding to listening and talking, were subsequently derived for each pupil. A key was developed to serve as guidelines in scoring the test so that a high level of consistency could be maintained.

In order to meet the deadline for the administration of post-tests no field-testing was conducted on the Speaking Test before it was used on the sample children. The test was administered as a post-test to a sample of 268 kindergarteners, 198 first graders, 60 second graders, and 47 third graders in April-May, 1971. No pre-test was given to the pupils.

In subsequent analysis of co-variance, IQ and SES were used as co-variates. Where the pupils were divided into IQ groups, only SES served as the co-variate. Mean scores for the various subgroups were tabulated as shown in Tables 21-26. The maximum scores for listening, talking, and speaking total were 28, 28 and 56 respectively.

The data indicated no significant differences in overall speaking ability between HEP and control pupils at the kindergarten level. The only significant differences among the various subgroups in listening was found to be a difference among HEP subgroups rather than between HEP and control pupils.

When kindergarten pupils were divided into high, medium and low IQ groups, the high IQ HEP group performed consistently better than high IQ control pupils. While the difference in talking ability was shown to be non-significant, the difference in listening ability was significant beyond the .05 level. Comparisons between medium IQ HEP and control pupils did not yeild any significatt differences, although the HEP pupils did score higher in both listening and talking. The low IQ HEP pupils had a higher score in talking but a lower score in listening when compared with low IQ control pupils. The difference in both cases was statistically non-significant at the .05 level.

Generally, the HEP first grade pupils did better than the control pupils on the speaking test. While no significant differences were produced in comparing the various HEP subgroups with the control groups, high and medium IQ HEP pupils scored consistently higher on both listening and talking than comparable control pupils. With regard to talking and speaking total (the sum of talking and listening), the difference in performance of low IQ HEP pupils was, however, lower than that of comparable control pupils both in talking and listening. The difference was significant beyond the .05 level in talking and speaking total.

Speaking ability of HEP second garde pupils seemed to be lower than that of comparable control pupils. Among the various HEP and control subgroups, the control group scored consistenly higher than the HEP groups, the difference in speaking total between cnntrol and HEP Pilot school pupils being significant at the .01 level. Among the various IQ groups, the control groups were also shown to perform better than comparable HEP groups. High IQ control pupils scored significantly higher in listening than HEP pupils. The medium IQ control pupils had a significantly higher score on talking. The rest of the differences were found to be statistically non-significant at the .05 level.

When the third grade pupils were divided into high and low IQ groups, however, it was found that high IQ control pupils did significantly better than high IQ HEP pupils in both listening and talking. The differences in talking and speaking total were found to be significant at the .05 level. The low IQ HEP pupils, on the other hand, scored higher than the low IQ control pupils on both listening and talking. The differences were, however, statistically non-significant.

In summary, it may be said that where pupils were not divided into IQ groups the HEP and control groups performed at essentially the same level in talking and listening. The only significant differences found between the HEP and control pupils (that between second grade HEP Pilot school and control pupils in speaking total) could very well be a statistical artifact in view of the fact that the two groups did not differ significantly when compared on either the listening or the talking subscores separately. When pupils were grouped according to their IQ levels, high and medium IQ HEP pupils seemed to perform better than the control pupils at the kindergarten and first grade level. The opposite (that control pupils performed better than HEP pupils) seemed to be the case with regard to low IQ pupils. At the second and third grade levels, high and medium IQ HEP pupils seemed to lag behind the control pupils. While low IQ second grade HEP pupils still appeared to fall behind their control counterparts in talking and listening, the low IQ third grade HEP pupils had higher scores both in listening and talking when compared with low IQ control pupils. In other words, there does seem to be a trend for low IQ pupils to benefit most from the "cumulative" effects of HEP. This finding further attests to the importance of conducting long-range evaluations to determine the effectiveness of the program.

In looking at the differences in speaking ability of HEP and control pupils, as measured by the Speaking Test, it should be borne in mind that the test was developed in a relatively short period of time. As mentioned earlier, no field-testing was conducted on the test before it was administered to HEP and control pupils. No data on reliability and validity was therefore available. Findings based on test results can at best be considered as only tentative. Another important factor having a direct bearing on performance of HEP pupils was the late delivery of HEP materials to the classrooms. In the listening/speaking area, the arrival of materials was delayed 3-70 days! While the adverse effects this might have on learning and achievement of HEP pupils is essentially a matter for speculation, it would be reasonable to assume that the late arrival of materials was conducive to low achievement.

Finally, the incomplete development of the listening/speaking materials described in the previous section of this report undoubtedly lowered the achievement levels which might reasonably be expected from HEP children. This was particularly true for the second and third graders.

Table 21. Raw Score Means for HEP and Control Pupils on Speaking Test (Listening)

Type of School & Classroom Organization	N	Treatment Mean	Adjusted Mean	F-Value
Kindergarten:				2.367*
Installation 3/2	71	7.70	7.24	
Installation SC	69	9.04	8.96	
Pilot 3/2 & SC	17	5.29	6.00	
Field 3/2 & SC	6	4.50	4.74	
Control 3/2	38	6.03	6.33	
Control SC	39	6.64	6.99	
First Grade:				.403 (NS)
Installation 3/2	67	10.64	10.78	
Installation SC	9	8.22	9.13	
Pilot 3/2	17	11.12	10.55	
Pilot SC	15	10.80	10.16	
Field 3/2 & SC	5	7.80	8.95	
Control 3/2	25	9.72	9.24	
Control SC	48	9.52	9.69	
Second Grade:				2.983 (NS)
Pilot 3/2 & SC	13	9.38	9.36	
Field 3/2 & SC	18	10.33	11.07	
Control 3/2 & SC	33	14.76	14.37	
Third Grade:				.033 (NS)
All HEP	24	16.04	17.27	
All Control	23	18.00	16.72	

NS: No significant differences among groups at the .05 level.

* $p < .05$ among the six groups. Subsequent tests indicated that the difference was among HEP group and not between HEP and control pupils.

Table 22. Raw Score Means for HEP and Control Pupils on Speaking Test (Talking)

Type of School & Classroom Organization	N	Treatment Mean	Adjusted Mean	F-Value
Kindergarten:				.969 (NS)
Installation 3/2	74	7.03	6.92	
Installation SC	70	8.47	8.45	
Pilot 3/2 & SC	15	6.27	6.43	
Field 3/2 & SC	6	6.33	5.99	
Control 3/2	39	7.41	7.55	
Control SC	43	6.05	6.12	
First Grade:				1.396 (NS)
Installation 3/2	68	10.41	10.49	
Installation SC	9	6.89	7.07	
Pilot 3/2	17	10.35	10.25	
Pilot SC	14	11.07	11.00	
Field 3/2 & SC	6	6.33	6.72	
Control 3/2	28	8.54	8.36	
Control SC	47	9.81	9.77	
Second Grade:				3.125 (NS)
Pilot 3/2 & SC	14	8.50	8.81	
Field 3/2 & SC	19	9.21	10.72	
Control 3/2 & SC	33	14.12	13.12	
Third Grade:				.379 (NS)
All HEP	24	16.63	16.56	
All Control	23	18.13	18.20	

NS: No significant differences among groups at the .05 level.

Table 23. Raw Score Means for HEP and Control Pupils on Speaking Test (Speaking Total)

Type of School & Classroom Organization	N	Treatment Mean	Adjustment Mean	F-Value
Kindergarten:				2.159 (NS)
Installation 3/2	79	13.47	12.99	
Installation SC	78	15.60	15.55	
Pilot 3/2 & SC	18	10.22	10.61	
Field 3/2 & SC	7	9.29	9.42	
Control 3/2	41	11.88	12.28	
Control SC	45	11.53	11.93	
First Grade:				1.847 (NS)
Installation 3/2	71	20.01	20.24	
Installation SC	10	13.60	14.41	
Pilot 3/2	18	19.72	19.24	
Pilot SC	15	21.13	20.52	
Field 3/2 & SC	7	11.00	11.74	
Control 3/2	29	16.62	16.01	
Control SC	48	19.13	19.25	
Second Grade:				5.764**
Pilot 3/2 & SC	14	17.21	17.61	* * * *
Field 3/2 & SC	19	19.00	21.44	
Control 3/2 & SC	33	28.89	27.31	* * * *
Third Grade:				.047 (NS)
All HEP	24	32.75	33.87	
All Control	23	36.13	34.97	

NS: No significant differences among groups at the .05 level.
** $p < .01$ among the three groups.
**** $p < .01$ between these two groups; $t = 3.55$

Table 24. Comparison Between HEP and Control IQ Groups on Speaking Test (Listening)

Grade Level/Ability Subgroup	HEP	Control	F-Value
Kindergarten:			
High Group			
N	60	20	
Treatment Mean	10.67	6.85	
Adjusted Mean	10.66	6.88	5.144*
Medium Group			
N	62	31	
Treatment Mean	7.19	6.16	
Adjusted Mean	7.23	6.10	1.294 (NS)
Low Group			
N	36	26	
Treatment Mean	4.92	6.15	
Adjusted Mean	4.92	6.15	1.360 (NS)
First Grade:			
High Group			
N	35	25	
Treatment Mean	12.57	10.84	
Adjusted Mean	12.63	10.75	1.519 (NS)
Medium Group			
N	42	28	
Treatment Mean	11.40	9.14	
Adjusted Mean	11.38	9.17	2.707 (NS)
Low Group			
N	33	20	
Treatment Mean	7.15	8.65	
Adjusted Mean	7.15	8.65	1.148 (NS)

Table 24. Comparison Between HEP and Control IQ Groups on Speaking Test (Listening) (Continued)

Grade Level/Ability Subgroup	HEP	Control	F-Value
Second Grade:			
High Group			
N	4	17	
Treatment Mean	8.75	15.82	
Adjusted Mean	8.26	15.94	5.321*
Medium Group			
N	15	11	
Treatment Mean	11.73	13.09	
Adjusted Mean	11.94	12.08	.112(NS)
Low Group			
N	10	5	
Treatment Mean	8.30	14.80	
Adjusted Mean	8.10	15.20	1.989(NS)
Third Grade:			
High Group			
N	7	16	
Treatment Mean	12.57	19.25	
Adjusted Mean	13.42	18.88	3.445(NS)
Low Group			
N	17	7	
Treatment Mean	17.47	15.15	
Adjusted Mean	18.20	13.37	.949(NS)

NS: No significant differences between the two groups at the .05 level.
* $p < .05$

Table 25. Comparison Between HEP and Control IQ Groups on Speaking Test (Talking)

Grade Level/Ability Subgroup	HEP	Control	F-Value
Kindergarten:			
High Group			
N	56	22	
Treatment Mean	7.41	6.14	
Adjusted Mean	7.37	6.25	.955(NS)
Medium Group			
N	65	29	
Treatment Mean	8.26	7.83	
Adjusted Mean	8.26	7.84	.051(NS)
Low Group			
N	40	31	
Treatment Mean	6.70	6.03	
Adjusted Mean	6.73	5.99	.512(NS)
First Grade:			
High Group			
N	37	24	
Treatment Mean	11.62	8.46	
Adjusted Mean	11.72	8.31	6.164*
Medium Group			
N	41	30	
Treatment Mean	9.93	8.63	
Adjusted Mean	9.99	8.54	1.497(NS)
Low Group			
N	33	21	
Treatment Mean	8.15	11.33	
Adjusted Mean	8.15	11.34	4.182*

Table 25. Comparison Between HEP and Control IQ Groups on Speaking Test (Talking) (Continued)

Grade Level/Ability Subgroup	HEP	Control	F-Value
Second Grade:			
High Group			
N	4	17	
Treatment Mean	11.50	14.29	
Adjusted Mean	11.92	14.19	.390(NS)
Medium Group			
N	16	11	
Treatment Mean	8.50	13.09	
Adjusted Mean	8.72	12.76	5.154*
Low Group			
N	11	5	
Treatment Mean	8.18	15.80	
Adjusted Mean	9.75	12.35	.0562(NS)
Third Grade:			
High Group			
N	7	16	
Treatment Mean	12.71	20.06	
Adjusted Mean	12.50	20.16	4.907*
Low Group			
N	17	7	
Treatment Mean	18.24	13.71	
Adjusted Mean	17.93	14.45	.948(NS)

NS: No significant differences between the two groups at the .05 level.
* $p < .05$

Table 26. Comparison Between HEP and Control IQ Groups on Speaking Test (Speaking Total)

Grade Level/Ability Subgroup	HEP	Control	F-Value
Kindergarten:			
High Group			
N	62	22	
Treatment Mean	17.02	12.36	
Adjusted Mean	16.96	12.53	3.549(NS)
Medium Group			
N	72	32	
Treatment Mean	13.65	12.09	
Adjusted Mean	13.68	12.03	.767(NS)
Low Group			
N	43	32	
Treatment Mean	10.28	10.84	
Adjusted Mean	10.36	10.74	.053(NS)
First Grade:			
High Group			
N	38	26	
Treatment Mean	22.63	18.23	
Adjusted Mean	22.82	17.95	4.236*
Medium Group			
N	43	30	
Treatment Mean	20.60	17.17	
Adjusted Mean	20.61	17.16	2.568(NS)
Low Group			
N	37	21	
Treatment Mean	13.65	19.57	
Adjusted Mean	13.65	19.57	5.669*

Table 26. Comparison Between HEP and Control IQ Groups on Speaking Test (Speaking Total) (Continued)

Grade Level/Ability Subgroup	HEP	Control	F-Value
Second Grade:			
High Group			
N	4	17	
Treatment Mean	20.25	30.12	
Adjusted Mean	20.19	30.13	3.302(NS)
Medium Group			
N	16	11	
Treatment Mean	19.50	26.18	
Adjusted Mean	20.15	25.24	2.113(NS)
Low Group			
N	11	5	
Treatment Mean	15.73	30.60	
Adjusted Mean	17.10	27.59	2.954(NS)
Third Grade:			
High Group			
N	7	16	
Treatment Mean	25.29	39.31	
Adjusted Mean	25.92	39.03	6.997*
Low Group			
N	17	7	
Treatment Mean	35.82	28.86	
Adjusted Mean	36.22	27.90	1.161(NS)

NS: No significant differences between the two groups at the .05 level.
* $p < .05$

5. Self-Direction

a. Classroom Observation

One of the underlying assumptions of the Hawaii English Language Skills subprogram is that it offers a learning environment which permits the pupil to assume a greater responsibility for his own learning. Thus, the degree to which the child interacts within his environment reveals, to some extent, the degree to which the child's classroom provides opportunities for self-directed learning.

One of the techniques used to determine whether children were provided with learning environments conducive to the development of self-directed behavior was to observe selected children in the sample HEP classrooms. The procedure involved assigning data collectors to sample classrooms and having them randomly select and observe two students from each sample class--one boy and one girl, and to observe various grouping patterns within the classroom at fifteen minute intervals. A checklist on behavioral characteristics and grouping patterns was used to indicate classroom atmosphere for self-direction.

A total of 103 grades K-3 children were individually observed in May and June, 1971, from thirty three-on-two* and twenty-two self-contained classrooms. A total of fifty-one boys and fifty-two girls were observed individually. Appendix 11 gives a breakdown of pupils observed by type of school, classroom organization, grade level, and sex.

The enrollment in three-on-two classrooms observed averaged 54.08 pupils, while the self-contained averaged 24.9 students. In addition, one three-on-three classroom had 92 pupils, one six-on-four classroom had 72 children, and one five-on-three classroom had 125 pupils. The number of students in 3-on-2 classrooms ranged from a low of 24 to a high of 69 pupils, whereas the range for self-contained classrooms was 19-29. There was no indication on the number of pupils enrolled in three 3-on-2 and one self-contained classrooms.

The three-on-two classrooms taught the Skills program for an average of 107 minutes per day, with 120 minutes being the mode (37% of classes). The self-contained classrooms conducted the Skills program an average of 103 minutes per day, with 120 minutes also being the mode (32% of classes). In the three-on-two, the HEP time block ranged from 65 minutes to 150 minutes while in the self-contained classroom the range was 75 to 135 minutes.

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*One classroom was a three-on-three organization, one was five-on-three, and one was a six-on-four.

The above data thus reveal that over one-third of the classrooms observed were adhering precisely to the suggested time block for conducting the English program (two hours per session), and that generally the majority of classrooms conducted the HEP very near to the recommended time period. On the other hand, the data also suggest that some classroom teachers were spending an inadequate amount of time on HEP, while others were spending more time than required (at the time of the observation). The latter implies that for some classroom teachers it was necessary and important to go beyond the recommended two-hour time block in teaching the HEP.

In the section on individual pupil activity, data collectors randomly selected one boy and one girl for observation during the entire HEP time block that day. Selected students were rated by the data collectors on nine characteristics considered to be appropriate self-directed behavior in the new English Language Skills program. Appendix 12 shows the data collectors' ratings by sex, grade level, type of school, and classroom organization.

The data in Appendix 12 reveal that over 85% of the grades K-3 pupils observed (boys and girls combined) demonstrated self-directed behavior to some extent, as determined by the nine behavioral characteristics listed, in both three-on-two and self-contained classrooms. Over 69% of those observed exhibited the nine self-directed behavioral characteristics most of the time, whereas about 17% demonstrated the characteristics some of the time. Only 5% of the students were rated as seldomly demonstrating self-directed behavior, while data collectors were unable to judge about 10% of the time.

The data further show that there were little differences between boys and girls in self-directed behavior and that these behavioral characteristics were observed in both three-on-two and self-contained classrooms.

Further analysis of the data reveal that first-year pupils in grades K and 1, and particularly in the first-year installation classes, were observed to have more difficulty in demonstrating self-directed behavior than second and third graders in Field and Pilot schools. This was evident in both three-on-two and self-contained classrooms alike. Only one male and one female second grader had difficulty (in attempting to solve problems on their own before asking for teacher assistance). All other 2nd and 3rd graders, in the opinion of the data collectors, had no problems in the nine areas listed.

In the second portion of the observation, the sample pupils (one boy and one girl from each sample classroom) were checked to determine the type of grouping patterns entered during the HEP period and the amount of time spent in each. Table 27 lists the tabulation by grade level, sex, type of school, and type of classroom organization.

Table 27. Frequency and Type of Grouping Pattern Entered During HEP Period*

		Three-on-Two									Self-Contained											Grand Totals	
		Field			Pilot				Inst.		Field		Pilot			Inst.		Subtotals					
Grouping Patterns		K	2	3	K	1	2	3	K	1	1	2	K	1	2	K	1	K	1	2	3		
Independent Activity	B	2	5	3	2	5	2	2	3	36	**	2	1	3	2	21	5	29	41	11	5	86	171
	G	1	5	2	3	3	**	1	15	20	2	**	3	4	**	24	2	46	31	5	3	85	
Pupil-Pupil Activity	B	2	3	2	2	2	2		1	14	**	1		2	1	21	2	26	20	7	2	55	130
	G	1	7	3	1	2	**	3	8	14	2	**	4	4	**	27	1	39	23	7	6	75	
Pupil-Teacher Activity	B	3	3	1		1	1		1	20	**				1	15	1	19	22	5	1	47	82
	G	1	1		1		**	2	6	10		**		1	**	13		21	11	1	2	35	
Small Group (10-15) Activity	B	1	3			4	2	2	5	17	**		2	1		2	5	10	27	5	2	44	84
	G	2	6		3	4	**	3	8	10		**		1	**	3		16	15	6	3	40	
Total Class Activity	B	1								1	**		2	3		13	2	16	6			22	46
	G						**			1		**	4	1	**	16	2	20	4			24	
Non-HEP Activity	B		2	1		2	1	1	3	13	**		2	1	1	16	4	21	20	4	2	47	86
	G			1		2	**		7	5	1	**	3		**	19	1	29	9		1	39	

* Tallies include different grouping patterns entered by the same pupil

** Indicates no students in that category

The data in the foregoing table clearly show that sample pupils spent the bulk of their time in independent or self-directed activity. Students entered this activity a total of 171 times, spending an average of 22.4 minutes in it per session. Boys and girls in both three-on-two and self-contained classrooms entered independent activities an almost equal number of times (86 and 85 times respectively).

Sample pupils also spent a great deal of time in pupil-pupil or peer-tutoring activities, as noted by the observations. Students entered this activity 130 times with the girls entering tutoring activities approximately one-third of the time more than boys (75 and 55 times respectively).

Total class activites were entered the least number of times (46) by sample students. Sample three-on-two students entered this activity only three times, whereas the bulk of the student entries were from self-contained classrooms. The frequency of students entering total class activities from self-contained classrooms may be attributed to the planning and evaluation sessions conducted at the beginning and end of the HEP period by the classroom teacher.

Sample students also entered non-HEP activities a total of 87 times, averaging 14.2 minutes per visit. About 29% of the entries were for readiness activities (e.g. worksheets, doll corners, watching Sesame Street on ETV, puzzles and games, drawing, coloring, etc.), while about 26% of the tabulations were for "play" activities (e.g. walking around, visiting, talking, etc.). About 17% of the non-HEP activities were for regular morning snack (juice) and use of bathroom. It should be pointed out that 54 or 62% of the total 87 entries in this category were recorded in self-contained classrooms. The latter findings suggest that self-contained classrooms, with only one teacher in the classroom, had more difficulty in classroom management and consequently had to make more adjustments in classroom organization.

In the final section of the checklist used for the observations, data collectors tabulated the number of students in the entire class who were participating in the various grouping patterns during 15-minute intervals. Table 28 lists the average number of pupils in each grouping pattern by type of classrooms.

Table 28. Average Number of Students in Six Grouping Patterns

Grouping Patterns	Three-on-Two Classrooms	Self-Contained Classrooms
Independent Activity	15	10
Pupil-Pupil Activity	9	8
Pupil-Teacher Activity	4	2
Small Group Activity	4	2
Total Class Activity*	6	4
Non-HEP Activity	7	3

*Total class activity includes situations in which all pupils in the classrooms were in groups larger than 15 at the same time (e.g. planning and evaluation sessions).

The foregoing data clearly show that students in both three-on-two and self-contained sample classrooms spent most of their time in independent or self-directed and peer-tutoring activities. The findings thus suggest that classroom teachers were clearly implementing the self-directed protocols as designed by HEP planners. Furthermore, the data reveal that most of the students in the sample classrooms were operating as independent, self-directed learners--responsible for their own learning.

The non-HEP activities engaged in by pupils generally parallel the findings described earlier. That is, some pupils were permitted by the teachers to participate in readiness activities, while others were not continuously working on HEP materials or were engaged in practices conducted in the conventional classrooms (e.g. morning snack, use of bathroom, etc.).

The overall conclusion reached from findings in this phase of the HEP evaluation study is that students in the new language skills program were demonstrating behavioral characteristics judged to be self-directed in nature, while at the same time the learning skills designed for the program. Furthermore, classroom teachers in the new program were apparently providing children with opportunities to develop independence in their quest for learning. The fact that some degree of non-language arts activity was tolerated in the classrooms further suggest that teachers in the new program were beginning to recognize that this type of behavior was normal and not necessarily damaging to the learning process.

b. Rating Scale

Another technique used to assess the impact of the Language Skills subprogram on self-directed behavior of pupils was to ask classroom teachers to rate children on fourteen selected behavioral characteristics considered to be self-directed in nature. The fourteen items were part of a list of twenty-five behavioral characteristics developed by project planners for use in rating all HEP pupils in grades K-3 in Field and Pilot schools. The fourteen items were also determined to be appropriate for use in rating children in control classrooms by a consensus of non-HEP classroom teachers.

Data for this phase of the evaluation was gathered at the end of the school year. Involved in the study were kindergarteners, first graders, second graders, and third graders. All grades K-3 children in Field and Pilot schools, using the new Skills program, were used for the experimental sample group. All sample grades K-3 non-HEP pupils used in the 1970-71 evaluation of the Hawaii English Program (see Chapter II) were included for the control group.

Classroom teachers were asked to rate the sample population on each of the fourteen characteristics, using the following three-point scale:

1 = learner has met the criterion (most of the time)
2 = learner is progressing toward the criterion
3 = learner has not demonstrated the behavior

Data were collected for a total of 3076 HEP pupils and 304 control pupils. The HEP sample consisted of 1052 kindergarten, 939 first grade, 613 second grade, and 472 third grade children. The control sample comprised 106 kindergarten, 105 first grade, 54 second, and 39 third grade pupils. For a breakdown of subsample groups by type of school, classroom organization, and sex, see Appendix 13.

In the analysis of teachers' ratings, the rating of 1 (learner has met criterion) was considered to be the most meaningful and reliable. Subsequently, only this rating was used in the following discussion and interpretation of the collected data. In comparing the HEP with the control group, percentages were averaged across the various subsample groups to obtain overall indices of performance.

In terms of comparisons between HEP and control groups, classroom teachers' ratings revealed a consistent trend in favor of HEP. For kindergarten pupils, the data showed higher average percentages of HEP pupils meeting the behavioral criteria on 10 of the 14 self-direction statements. The greatest difference occurred in the area of independent selection of an appropriate activity to begin the day. Approximately 76 percent of the HEP kindergarten pupils were rated as being able to select (independently of the teacher) an appropriate activity to begin the day whereas only 44 percent of kindergarten children in the control group were rated as being able to do the same. In the area of helping other children learn, there was also a marked difference between the two groups. Teachers' ratings indicated that 64 percent of the HEP kindergarteners were able to help other children learn while only 35 percent of their control counterparts could do the same. Other major differences between the two sample groups were found in accepting learning from other children, selecting an activity from those suggested by the teacher, picking up work where the pupil had left off, and starting work on an activity after selection. On these items, the data were in favor of HEP by a considerably large margin. Of the four items on which the control pupils seemed to do better than the HEP children, the only one that revealed a relatively great difference was asking the teacher for help when the pupil needed it. About 85 percent of the control pupils, as compared with 74 percent of HEP pupils, were rated as having met the behavioral criterion. On the other three items, the differences between the two groups appeared to be negligible. The average percentages of HEP and control kindergarten pupils meeting various behavioral criteria for self-direction were tabulated in Table 29.

Table 29. Average Percentages of Kindergarten Pupils Meeting the Various Self-Direction Behavioral Criteria

	Behavior	Average Percentage	
		HEP	Control
1.	Selects an activity from those suggested by the teacher	87	63
2.	Selects independently of the teacher an appropriate activity to begin the day	76	44
3.	Begins work on an activity after selection	77	65
4.	Goes from one activity to a second appropriate activity without teacher direction	46	53
5.	Locates the materials he needs on his own	67	63
6.	Picks up work where he has left off	67	44
7.	Attempts to solve problems before going to the teacher for help	37	39
8.	Solves problems on his own without going to the teacher	23	21
9.	Solves problems with the help of others without going to the teacher	28	26
10.	Asks the teacher for help when he needs it	74	85
11.	Uses equipment and/or materials properly	66	69
12.	Puts materials away when he finishes working	67	66
13.	Helps other children learn	64	35
14.	Accepts learning from other children	75	50

For first grade pupils, the HEP children as a group did better than or equally well as their control counterparts on 12 of the 14 items. The greatest difference occurred again in the ability to select an appropriate activity to begin the day. Over 85 percent of the HEP pupils were rated as having demonstrated such ability. In comparison, only 56 percent of the control pupils were rated as having developed this behavior. The next greatest difference, again conforming to the general pattern, was found in the area of helping other children learn. The data showed that 73 percent of the HEP first grade pupils were able to help other children learn while only 48 percent of the first grade control pupils were said to have the same ability. The HEP and control groups also differed conspicuously with regard to their ability to (a) select an activity from those suggested by the teacher; (b) begin work on an activity after selection; (c) locate materials the pupil needed; (d) pick up work where the pupil had left off; and (e) accept learning from other children. Differences between the two groups on these items were all in favor of HEP. The control pupils, on the other hand, did better in solving problems on their own or with the help of other children without going to the teacher. The percentage differences, however, appeared to be slight and negligible. Percentages of first grade pupils who had met the various behavioral criteria are presented in Table 30.

Table 30. Average Percentages of First Grade Pupils Meeting the Various Self-Direction Behavioral Criteria

	Behavior	Average Percentage	
		HEP	CONTROL
1.	Selects an activity from those suggested by the teacher	90	68
2.	Selects independently of the teacher an appropriate activity to begin the day	85	56
3.	Begins work on an activity after selection	81	60
4.	Goes from one activity to a second appropriate activity without teacher direction	54	47
5.	Locates the materials he needs on his own	78	59
6.	Picks up work where he has left off	77	54
7.	Attempts to solve problems before going to the teacher for help	41	41
8.	Solves problems on his own without going to the teacher	19	26
9.	Solves problems with the help of others without going to the teacher	22	32
10.	Asks the teacher for help when he needs it	75	75
11.	Uses equipment and/or materials properly	75	67
12.	Puts materials away when he finishes working	72	64
13.	Helps other children learn	73	48
14.	Accepts learning from other children	79	61

In terms of the overall pattern, the performance of second grade children was almost identical to that of first grade pupils. The HEP group did remarkably better than the control group in all but two of the behavioral areas. The most conspicuous differences again pertained to the ability to independently select an appropriate activity to begin the day. While only 30 percent of the control pupils were rated as having acquired this ability, well over 88 percent of the HEP children were rated as having this behavior in their repertoire. Following the general trend further, another major difference was revealed in the area of helping other children learn. Seventy-three percent of the HEP children were rated as being able to help other children learn. Only 38 percent of the control pupils received the same rating. The two sample groups also differed considerably with regard to (a) selecting an activity from those suggested by the teacher; (b) beginning work on an activity after selection; (c) going from one activity to a second appropriate activity without teacher direction; (d) locating materials the pupil needed; (e) picking up work where the pupil had left off; (f) asking the teacher for help when the pupil needed it; (g) using equipment and/or materials properly; (h) putting materials away when the pupil finished working; and (i) accepting learning from other children. All differences relative to the above items were in favor of the HEP. The two self-directed behaviors in which the HEP pupils as a group seemed to lag behind their control counterparts were (a) solving problems on their own without going to the teacher; and (b) solving problems with the help of others without going to the teacher. Table 31 presents a summary of the relevant data.

Table 31. Average Percentages of Second Grade Pupils Meeting the Various Self-Direction Behavioral Criteria

	Behavior	Average Percentage	
		HEP	Control
1.	Selects an activity from those suggested by the teacher	92	59
2.	Selects independently of the teacher an appropriate activity to begin the day	88	30
3.	Begins work on an activity after selection	82	57
4.	Goes from one activity to a second appropriate activity without teacher direction	63	41
5.	Locates the materials he needs on his own	76	45
6.	Picks up work where he has left off	77	53
7.	Attempts to solve problems before going to the teacher for help	45	40
8.	Solves problems on his own without going to the teacher	22	38
9.	Solves problems with the help of others without going to the teacher	31	36
10.	Asks the teacher for help when he needs it	79	67
11.	Uses equipment and/or materials properly	75	64
12.	Puts materials away when he finishes working	72	55
13.	Helps other children learn	73	38
14.	Accepts learning from other children	78	49

The effects of HEP on pupils' self-directed behavior were further confirmed by the relative performance of third grade HEP and control pupils. All comparisons between the two sample groups with respect to the 14 behavioral items yielded results in favor of the HEP. The superiority of the HEP children in their ability to independently select an appropriate activity to begin the day was again demonstrated. Teachers' ratings showed that 88 percent of the HEP third grade children met the behavioral criterion. Only 49 percent of the control children were rated as having the same ability. As a reversal to the pattern established by lower grade pupils, the next major difference this time, in favor of HEP, was found in pupils' ability to solve problems on their own without going to the teacher. Forty-eight percent of the HEP third grade pupils received ratings indicating that they were able to solve problems on their own. Only 23 percent of the control children were rated as having acquired this behavior. As mentioned earlier, differences between the two groups with respect to all other behavioral items were also in favor of HEP. It might be added parenthetically that most of the differences appeared to be substantial. Data were tabulated in Table 32.

Table 32. Average Percentages of Third Grade Pupils Meeting the Various Self-Direction Behavioral Criteria

	Behavior	Average Percentage	
		HEP	Control
1.	Selects an activity from those suggested by the teacher	90	74
2.	Selects independently of the teacher an appropriate activity to begin the day	88	49
3.	Begins work on an activity after selection	80	65
4.	Goes from one activity to a second appropriate activity without teacher direction	67	53
5.	Locates the materials he needs on his own	78	69
6.	Picks up work where he has left off	74	61
7.	Attempts to solve problems before going to the teacher for help	62	48
8.	Solves problems on his own without going to the teacher	48	23
9.	Solves problems with the help of others without going to the teacher	55	42
10.	Asks the teacher for help when he needs it	78	60
11.	Uses equipment and/or materials properly	79	68
12.	Puts materials away when he finishes working	74	57
13.	Helps other children learn	69	60
14.	Accepts learning from other children	72	59

In addition to comparing HEP and control groups, it was felt that it might also be useful to look at the relative performance of HEP 3-on-2 and self-contained pupils with regard to self-directed behavior. It was hypothesized that certain conditions existed in the 3-on-2 setting that should render it more conducive to self-directed behavior. First, the larger class size should make it more imperative that pupils be self-directed. Secondly, the presence of three teachers should tend to work against the possibility of any one of them imposing on overall structure on classroom activities. Pupils thus had more freedom and independence in the planning and execution of activities.

The expectation of higher performance of 3-on-2 pupils in self-direction was partially borne out by teachers' ratings. For kindergarten pupils, out of a total of 84 comparisons of average percentages 19 were in favor of the 3-on-2 setting while 60 seemed to indicate that the self-contained setting was more conducive to self-directed behavior. The other comparisons did not yield any differences between the two groups. For the first and second grade children, the ratings were clearly in favor of the 3-on-2 setting. Data for the third graders showed a 22-34 (out of 56 comparisons) difference in favor of self-contained classes. It should, however, be noted that examples for third grade self-contained pupils were extremely small. The differences pertaining to third grade pupils could easily have been results of sampling errors.

Another expectation with respect to HEP pupils' performance in self-direction was that Field and Pilot school children would perform better than Installation school pupils, the rationale being that Installation schools were the first year schools with new pupils while Field and Pilot schools should to some extent have benefited from the 'cummulative' effects of HEP. The collected data, however, provided no conclusive evidence with regard to this expectation. The inconclusiveness of the evidence was due to the following factors: (1) Installation schools were instituted only at the kindergarten and first grade level. In terms of the cummulative' effect of the HEP, no difference should be expected to exist among Field, Pilot and Installation school kindergarten pupils. Likewise, little difference could be expected to exist among Field, Pilot and Installation first graders. (2) For the first grade pupils, the samples for Installation self-contained children were extremely small and large sampling errors could have contributed the major part of the variance in the data.

In the light of the circumstances mentioned above, very little importance could be attached to the differences (which seemed to favor Installation pupils) among Field, Pilot and Installation pupils with regard to self-directed behavior.

In summary, it seems reasonable to state that there was abundant evidence that the HEP pupils did considerably better than their control connterparts in the area of self-direction. The HEP children at all grade levels received higher teacher ratings on all or a predominant majority of the 14 selected behavioral items. The difference between the two groups was most remarkable with respect to the independent selection of an appropriate activity to begin the day and helping other children learn. Apart from attesting to the validity of the overriding philosophy of individualized instruction this finding also confirmed the value of two inherent features of the HEP - that of pupils planning their own activities and peer-tutoring. The only area where HEP pupils (first and second graders) seemed to lag behind the control children was solving problems on their own or with the help of others without going to the teacher. It might be noted, in this regard, that inasmuch as the HEP classroom teacher served, among other things, as a resource person, it would seem natural for HEP pupils to show a stronger tendency to come to the teacher with problems. The non-HEP pupil, on the other hand, might find it more expedient in a traditional classroom setting to solve problems on their own, even when some consultation with the teacher would have been more desirable. The collected data also seemed to provide some evidence that the 3-on-2 setting might be more conducive to self-directed behavior than a self-contained classroom. The evidence was, however, inconclusive and further investigation is clearly needed in this area.

c. Anecdotes

Another phase in the attempt to assess self-directed student behavior involved asking all classroom teachers using the HEP to submit anecdotal reports of incidents they considered as examples of self-directed behavior. A total of twenty-four classroom teachers (16 from three-on-two and 8 from self-contained) submitted anecdotes reporting 74 different incidences considered to be self-directed in nature. Of the total, nineteen were from Installation schools, two from Pilot schools, two from Field schools, and one with no designation. All but 13 of the incidents involved pupils in grades K and 1.

Responses made by teachers were condensed and categoried as follows:

	Frequency
Children remained in class during recess to work on HEP (and non-HEP activities); work independently, (without teacher supervision); or with peers as tutors	15
Children chose to work on HEP when given options	13
Children reported early (before school started) to work on HEP, worked independently (without teacher supervision), with peers as tutors, or with some teacher assistance	10

	Frequency
Children voluntarily remained after school to complete HEP tasks	4
Children tutored each other without teacher direction	2
Children entered HEP activities without being directed	2
Non-English speaking pupil able to communicate and became more self-directed	2
Children completed lower levels in Instructional Library during their own time in order to go on to higher level	1
Child repeatedly reminded teacher to permit him to tutor his peers	1
Children reminded teacher to permit them to remain in class during recess to complete tasks because they were too playful during regular class period	1
Children encouraged each other to complete tasks, staying in during recess to tutor peers	1
Children continued working when teacher left room	1
Child offered to help in checking because teacher was busy	1
Children being checked erased stickers without being told when errors were made	1
Child turned off lights (HEP closing procedure) because class was noisy	1
Parents informed teacher that children are more self-directed at home	1
Children identified and marked defective parts of materials without teacher direction	1
Class put on a May Day program under pupil leadership	1

	Frequency
Low ability children realized they needed to complete tasks before entering game activities	1
Children corrected teacher on HEP procedures	1
Children sang songs without teacher direction during lunch and attendance counts	1
Child asked permission to help another pupil who was absent, in making the Mother's Day card	1
Pupil made own decision in choosing work tasks	1

The foregoing data suggest that in the opinion of classroom teachers, many of the pupils who were in the Hawaii English Program during the past school year demonstrated behavioral characteristics considered to be responsible and self-directed in nature. Furthermore, these children appeared to have enjoyed working with the HEP materials and were eager to complete selected tasks. The findings further suggested that through the informal, individualized learning atmosphere of the HEP program, children are relating more comfortably toward adults and peers, and with a tendency of being more thoughtful and helpful toward others.

6. Pupil Attitudes About Self and School

a. Self-Concept and Motivation Inventory (SCAMIN)

The Hawaii English Program is concerned not only with the cognitive output (in the form of academic achievement) of HEP pupils but also the program's impact on the affective side of pupils' individual development. While much emphasis is placed on the attainment of high levels of achievement, the HEP was also designed to bring about improvement in self-concept and motivation through the learning experiences provided by the program. It was therefore considered necessary that this affective domain be investigated in the evaluation study.

In the attempt to fulfill this evaluation requirement, the Self-Concept and Motivation Inventory (SCAMIN), Early Elementary Form, was selected as an instrument to measure the affective growth of sample HEP and control pupils.

The inventory has a pictorial format and a semi-projective response system. The SCAMIN items, each of which portrays a situation or initial incident, are read to pupils by test administrators. The pupils respond to the situation by selecting faces from a five-face response scale. The faces range from very unhappy to very happy and have scale values of 1-5. (For the failure avoidance subscore, the scale values are reversed.) Samples of items are: "What face would you wear if you had hard arithmetic problems to do?" and "What face would you wear if you couldn't answer an easy question?" There were a total of 24 such items.

The inventory was originally constructed to measure four separate components of self-concept and motivation, each represented by 6 SCAMIN items. These are goal and achievement needs, failure avoidance, role expectations, and self-adequacy. Goal and achievement needs refers to the positive regard with which a pupil perceives the intrinsic and extrinsic rewards of learning and performing in school. Failure avoidance relates to the awareness and concern toward shunning the embarassment and sanctions which are associated with failure in school. Role expectation is defined as the positive acceptance of the aspiratons and demands that the pupil thinks others (e.g. parents and teachers) expect of him. Self-adequacy is the positive regard which a pupil views present and future probabilities of success. Motivation is said to be composed of academic and social goal and achievement needs and low level failure avoidance. Results of recent studies have shown that role expectations and self-adequacy, as defined in the inventory, are relatively unstable as separate components. These two factors are therefore combined as one single factor of self-concept by the publishers.

Corresponding to the three components of self-concept and motivation, three separate SCAMIN subscores were derived for each pupil in the present evaluation study.

The inventory was administrred to the HEP and control pupils as a pre-test in September-October, 1970, and as a post-test in April-May, 1971. A total of 259 kindergarten pupils, 208 first grade pupils, 71 second grade pupils, and 54 third grade pupils were included in the sample. The total sample was sub-divided on the basis of type of school and classroom orgainizaion for kindergarten and first grade pupils, and type of school for second grade pupils. Due to the smaller sample size, third grade pupils were only divided into HEP and control groups. In addition, pupils were also stratified by ability levels into high, medium, and low IQ groups.

The analysis of co-variance procedure was used to analyze the collected inventory data. The SCAMIN pre-test, IQ, and SES were used as co-variates in the analyses. Where pupils were subdivided into IQ groups, only pre-test and SES were used as co-variates.

Mean scores for the various subgroups as well as results of tests of significance on differences in mean scores between HEP and control pupils are presented in Tables 33-38. The maximum scores for goal and achievement needs, failure avoidance, and self-concept are 30, 30, and 60 respectively. With the exception of failure avoidance, a higher score indicated a higher level of attainment in the affective domain under investigation. In failure avoidance, a lower score indicated a lower level failure avoidance and thus a higher level of motivation.

The inventory data indicated that there were no significant differences among the HEP and control subgroups of kindergarten pupils with regard to self-concept and motivation. When pupils were divided into high, medium, and low IQ groups, the high IQ HEP pupils seemed to have a slightly higher level of self-concept and goal and achievement needs as compared with their control counterparts. However, the high IQ HEP pupils also seemed to have a relatively higher level of failure avoidance. In all instances, the mean score differences were found to be statistically non-significant at the .05 level.

Results for first grade pupils also revealed no significant differences among the HEP and control subgroups. The mean scores of high IQ HEP and control pupils were practically identical on all three SCAMIN factors. The medium IQ HEP and control pupils scored in very much the same way, with the HEP groups having slightly higher scores on failure avoidance and self-concept. The low IQ HEP pupils scored consistently higher than the low IQ control pupils in both self-concept and goal and achievement needs. The control pupils, on the other hand, did better in failure avoidance. All mean score differences for first graders were non-significant at the .05 level.

Subgroups of HEP and control second grade pupils also did not seem to differ significantly from one another with regard to self-concept and motivation. The high IQ HEP pupils did score slightly higher on both motivation components-goal and achievement needs and failure avoidance, while high IQ control pupils scored higher on self-concept. The medium IQ control pupils had higher scores on goal and achievement needs and self-concept. They also seemed to do better than their HEP counterparts in failure avoidance. The low IQ HEP groups had higher scores on failure avoidance and self-concept and a lower score on goal and achievement needs as compared with the low IQ control groups. All mean score differences were small in magnitude and statistically non-significant at the .05 level.

Results for third grade pupils showed that the difference in mean scores on self-concept and failure avoidance was in favor of HEP pupils. In goal and achievement needs, the control pupils seems to do better, the difference in mean scores being very slight. The high IQ HEP pupils showed a higher level of self-concept and goal and achievement needs, substantially so in self-concept, as compared with high IQ control pupils. The reverse was true of low IQ groups: the low IQ HEP pupils were found to score lower than the low IQ control pupils on goal and achievement needs and self-concept components, although the differences were small in magnitude. With regard to failure avoidance, low IQ HEP pupils seemed to do better than their control counterparts. High IQ HEP pupils on the other hand, showed a higher level of failure avoidance as compared with the control pupils. None of the mean score differences pertaining to third grade pupils were significant at the .05 level.

By way of summary, it may be noted that while no consistent trend emerged from the comparisons made between HEP and control groups with regard to self-concept and motivation, the data clearly suggest that HEP pupils maintained a very high level of self-concept and motivation as measured by SCAMIN. In fact, if one were to compare the overall performance of HEP and control pupils without considering statistical levels of significance, the inventory data would seem to favor the former. While there seems to be a slight tendency for HEP pupils to score higher on failure avoidance, which theoretically suggests a lower level of motivation, it should be pointed out that the HEP was designed to provide abundant opportunities for success experiences. The planning session which precedes classroom activities each morning all but guarantees the successful completion of the activities. Failure in terms of final goal achievement should therefore be a relatively rare occurrence in an HEP classroom. Under these circumstances, it would seem natural for HEP pupils to try to adopt "realistic" goals in order to avoid non-goal achievement or failure.

At any rate, several factors should be considered in looking at the inventory data.

(1) As pre-test was used as a co-variate, gains in self-concept and motivation occurring previous to the school year covered by the evaluation study were in a statistical sense discounted. This consideration is of particular importance with regard to most HEP second and third grade pupils who had been in HEP all along. Whatever "cumulative" effects the HEP might have on these pupils during the previous years were partialled out in the analysis.

(2) Behavioral changes in the area of motivation and self-concept are probably a very slow process, especially in a naturalistic setting like the classroom where such behaviors are not directly "taught". It would therefore seem more profitable to measure these behavioral changes after a longer period of exposure to treatment effects.

(3) The possibility that the SCAMIN may not be sensitive enough to measure relatively small differences in self-concept and motivation should by no means be ruled out. In fact, that this is indeed the case seems to be indicated by the fact that of all the comparisions made in the analyses, none of the F-values turned out to be significant at the .05 level. A relatively crude instrument might very well obscure differences which a more sensitive measure

would have shown to be significant.

(4) Apart from the general growth in self-concept and motivation, HEP and control pupils' more specific attitudes toward school and school activities were also measured in this evaluation study. The results of the attitude inventory study, to be discussed in the following section, should be considered as a complement to the findings reported in this section.

b. Attitude Toward School and School Activities

One of the basic assumptions of the new Hawaii English Program is that the learning experiences encountered are centered around each individual child. An ultimate test of this child-centered approach, then, is to determine whether the pupil in the new English curriculum has positive attitudes in his quest for knowledge.

An attempt to assess the attitudes of children toward school and school activities was made in October (pre-test) and April-May (post-test), 1971, by administering an HEP-developed instrument to the sample children in the evaluation study of the HEP program. A total of 259 kindergarten, 201 first grade, 67 second grade, and 54 third grade children were administered the survey relating to their attitudes about school.

The attitude inventory consisted of 19 statements relating to school and school activities. Each statement was read separately by test administrators and the children were required to select one of five faces, ranging from a very sad face to a very happy one. The face selected was interpreted to reflect the children's own attitude toward that activity or situation.

Each face for each item was awarded a numerical value ranging from one to five. The saddest face received one point while the happiest received five points. Each item was scored separately and a total score was computed from scores of eight of the 19 items. The eight items selected were deemed as being most appropriate in indicating positive attitudes about school and school activities. Thus, the maximum score attainable was 40 and the higher the total score, the more positive the attitude toward school.

Total raw score means were tabulated for each grade level and subgrouped by type of school and classroom organization for kindergartners and first graders, by type of school for second graders, and by experimental/control subgroups for third graders. Pre-test, SES, and IQ scores were used as covariates to adjust the total score means for comparison purposes. Table 39 reports the findings.

The resulting analyses of the data shown in Table 39 reveal that there were no consistent patterns in the responses of kindergartners and first graders. Among kindergarten subgroups, those

Table 33. Raw Score Means for HEP and Control Pupils on SCAMIN (Goal and Achievement Needs)

Type of School and Classroom Organization	N	Treatment Mean	Adjusted Mean	F-Value
Kindergarten:				.787 (NS)
Inst. 3/2	72	25.19	25.02	
Inst. SC	86	24.70	24.78	
Pilot 3/2	10	26.40	26.10	
Pilot SC	6	25.67	25.28	
Field 3/2 and SC	6	24.17	24.50	
Control 3/2	27	26.52	26.86	
Control SC	37	24.97	24.95	
First Grade:				1.243 (NS)
Inst. 3/2	70	25.39	25.43	
Inst. SC	15	26.60	27.21	
Pilot 3/2	13	27.31	26.99	
Pilot SC	14	26.07	25.66	
Field 3/2 and SC	14	25.29	25.47	
Control 3/2	29	26.38	26.11	
Control SC	48	25.19	25.25	
Second Grade:				.665 (NS)
Pilot 3/2 and SC	12	23.83	23.81	
Field 3/2 and SC	20	24.90	25.01	
Control 3/2 and SC	39	24.69	24.64	
Third Grade:				.111 (NS)
All HEP	23	25.13	24.41	
All Control	30	24.13	24.68	

NS: No significant differences among groups at the .05 level.

Table 34. Raw Score Means for HEP and Control Pupils on SCAMIN (Failure Avoidance)

Type of School and Classroom Organization	N	Treatment Mean	Adjusted Mean	F-Value
Kindergarten:				1.050 (NS)
Inst. 3/2	72	22.50	22.30	
Inst. SC	85	22.55	22.70	
Pilot 3/2	12	25.42	25.24	
Pilot SC	7	22.71	23.02	
Field 3/2 and SC	7	23.14	23.66	
Control 3/2	31	25.16	24.95	
Control SC	36	22.22	22.36	
First Grade:				1.135 (NS)
Inst. 3/2	70	24.64	24.69	
Inst. SC	16	23.50	23.98	
Pilot 3/2	13	24.77	24.33	
Pilot SC	16	24.25	24.07	
Field 3/2 and SC	14	24.50	24.79	
Control 3/2	28	25.14	24.93	
Control SC	51	23.37	23.37	
Second Grade:				1.683 (NS)
Pilot 3/2 and SC	12	26.33	26.34	
Field 3/2 and Sc	20	23.85	24.74	
Control 3/2 and SC	39	25.21	24.75	
Third Grade:				.373 (NS)
All HEP	23	24.57	24.97	
All Control	31	25.84	25.54	

NS: No significant differences among groups at the .05 level.

Table 35. Raw Score Means for HEP and Control Pupils on SCAMIN (Role expectations and Self-Adequacy)

Type of School and Classroom Organization	N	Treatment Mean	Adjusted Mean	F-Value
Kindergarten:				1.379 (NS)
Inst. 3/2	78	44.53	44.24	
Inst. SC	88	44.02	44.15	
Pilot 3/2	12	40.92	41.72	
Pilot SC	7	48.00	47.04	
Field 3/2 and SC	5	38.20	36.90	
Control 3/2	33	44.55	45.20	
Control SC	36	45.97	45.77	
First Grade:				.599 (NS)
Inst. 3/2	70	45.20	45.21	
Inst. SC	15	46.20	46.05	
Pilot 3/2	12	47.42	47.57	
Pilot SC	15	46.20	46.24	
Field 3/2 and SC	13	47.23	47.16	
Control 3/2	29	45.14	45.07	
Control SC	50	46.06	46.10	
Second Grade:				.866 (NS)
Pilot 3.2 and SC	13	42.38	42.11	
Field 3/2 and SC	19	44.68	44.86	
Control 3/2 and SC	37	44.05	44.06	
Third Grade:				.122 (NS)
All HEP	23	43.78	42.34	
All Control	30	40.60	41.71	

NS: No significant differences among groups at the .05 level.

Table 36. Comparison Between HEP and Control IQ Groups on SCAMIN (Goal and Achievement Needs)

Kindergarten: High Group	HEP	Control	F-Value
N	64	17	
Treatment Mean	26.09	26.59	
Adjusted Mean	26.39	25.48	1.265 (NS)
Medium Group			
N	73	23	
Treatment Mean	25.60	26.09	
Adjusted Mean	25.65	25.94	.053 (NS)
Low Group			
N	38	24	
Treatment Mean	22.61	24.50	
Adjusted Mean	22.62	24.48	1.887 (NS)
First Grade: High Group			
N	36	27	
Treatment Mean	26.17	26.56	
Adjusted Mean	26.26	26.43	.093 (NS)
Medium Group			
N	50	25	
Treatment Mean	25.58	26.40	
Adjusted Mean	25.59	26.38	1.413 (NS)
Low Group			
N	36	25	
Treatment Mean	26.28	23.88	
Adjusted Mean	26.16	24.05	3.356 (NS)
Second Grade: High Group			
N	5	21	
Treatment Mean	25.20	24.57	
Adjusted Mean	25.57	24.48	.658 (NS)

Table 36. Comparison Between HEP and Control IQ Groups on SCAMIN (Goal and Achievement Needs) (Continued)

Medium Group	HEP	Control	F-Value
N	13	11	
Treatment Mean	24.15	25.55	
Adjusted Mean	24.38	25.27	.254 (NS)
Low Group			
N	12	7	
Treatment Mean	24.50	23.71	
Adjusted Mean	23.91	24.72	.384 (NS)
Third Grade: High Group			
N	7	19	
Treatment Mean	26.00	23.16	
Adjusted Mean	24.98	23.53	1.536 (NS)
Low Group			
N	16	11	
Treatment Mean	24.75	25.82	
Adjusted Mean	24.66	25.95	1.490 (NS)

NS: No significant difference between the two groups at the .05 level.

Table 37. Comparison Between HEP and Control IQ Groups on SCAMIN (Failure Avoidance)

Kindergarten: High Group	HEP	Control	F-Value
N	66	18	
Treatment Mean	24.36	23.50	
Adjusted Mean	24.43	23.24	2.643 (NS)
Medium Group			
N	73	24	
Treatment Mean	22.78	25.46	
Adjusted Mean	22.86	25.21	1.576 (NS)
Low Group			
N	39	25	
Treatment Mean	19.97	21.84	
Adjusted Mean	20.44	21.11	.190 (NS)
First Grade: High Group			
N	36	27	
Treatment Mean	25.33	24.81	
Adjusted Mean	25.31	24.85	.503 (NS)
Medium Group			
N	51	26	
Treatment Mean	24.39	23.85	
Adjusted Mean	24.42	23.80	.816 (NS)
Low Group			
N	38	26	
Treatment Mean	24.11	23.31	
Adjusted Mean	24.25	23.10	1.069 (NS)
Second Grade: High Group			
N	5	19	
Treatment Mean	24.40	25.29	
Adjusted Mean	25.99	25.37	.280 (NS)

Table 37. Comparison Between HEP and Control IQ Groups on SCAMIN (Failure Avoidance) (Continued)

Medium Group	HEP	Control	F-Value
N	13	12	
Treatment Mean	25.77	25.33	
Adjusted Mean	26.03	25.05	.468 (NS)
Low Group			
N	12	8	
Treatment Mean	23.83	23.63	
Adjusted Mean	23.83	23.63	.010 (NS)
Third Grade: High Group			
N	7	19	
Treatment Mean	25.29	26.05	
Adjusted Mean	26.14	25.74	.040 (NS)
Low Group			
N	16	12	
Treatment Mean	24.25	25.50	
Adjusted Mean	24.47	25.21	.751 (NS)

NS: No significant difference between the two groups at the .05 level.

Table 38. Comparison Between HEP and Control IQ Groups on SCAMIN (Role Expectations and Self-Adequacy)

Kindergarten: High Group	HEP	Control	F-Value
N	69	20	
Treatment Mean	45.06	45.05	
Adjusted Mean	45.28	44.29	.456 (NS)
Medium Group			
N	78	27	
Treatment Mean	44.22	44.74	
Adjusted Mean	44.26	44.62	.053 (NS)
Low Group			
N	38	22	
Treatment Mean	42.34	46.18	
Adjusted Mean	41.85	47.02	3.294 (NS)
First Grade: High Group			
N	34	28	
Treatment Mean	45.47	45.64	
Adjusted Mean	45.52	45.58	.001 (NS)
Medium Group			
N	50	26	
Treatment Mean	46.10	46.12	
Adjusted Mean	46.22	45.89	.068 (NS)
Low Group			
N	37	25	
Treatment Mean	46.38	45.40	
Adjusted Mean	46.42	45.33	.469 (NS)
Second Grade: High Group			
N	5	19	
Treatment Mean	41.80	44.47	
Adjusted Mean	42.55	44.28	.170 (NS)

Table 38. Comparison Between HEP and Control IQ Groups on SCAMIN (Role Expectations and Self-Adequacy) (Continued)

Medium Group	HEP	Control	F-Value
N	12	11	
Treatment Mean	43.33	45.18	
Adjusted Mean	43.26	45.26	1.135 (NS)
Low Group			
N	13	7	
Treatment Mean	45.23	41.14	
Adjusted Mean	44.81	41.92	.760 (NS)
Third Grade: High Group			
N	7	19	
Treatment Mean	43.71	38.42	
Adjusted Mean	43.42	38.53	3.329 (NS)
Low Group			
N	16	11	
Treatment Mean	43.81	44.36	
Adjusted Mean	43.51	44.80	.294 (NS)

NS: No significant difference between the two groups at the .05 level.

in Pilot school self-contained classrooms had the highest mean scores, whereas pupils in the Installation school self-contained settings had the lowest. No significant differences at the .05 level were noted among all seven subgroups.

At the first grade level, Pilot school children in three-on-two classrooms had the highest mean score, while those in control three-on-two classes had the lowest. There were also no significant differences among the seven first grade subgroups at the .05 level.

A response pattern appears to surface when analyzing the scores of second and third graders. At both grade levels, the HEP students who had been in the program longer (e. g., Pilot and Field school children, as compared to Installation School children) scored consistently higher than their non-HEP counterparts. Although no significant differences were noted among groups at the second grade level, there was a significant difference ($p < .01$) between third graders.

The findings thus suggest that children progressing through the program develop more positive attitudes about school and school activities the longer they are in HEP. In addition, the findings on third graders, and to some degree the second graders, clearly show that HEP children have more positive feelings about school.

To assess the attitudes of pupils in the various ability groups, tabulations of total score means were made for each of the four grade levels. Student scores were subgrouped into three ability levels for kindergarten, first, and second grade pupils, while third graders were subdivided into two groups. Pre-test and SES scores were used as covariates to adjust means for comparing the different subgroups. Table 40 shows the results of the analyses.

The analyses on the attitudes of pupils toward school by ability groupings reveal a consistent pattern, favoring HEP children. Except for kindergartners in the low ability subgroups, HEP pupils in all ability groups for each grade level scored consistently higher than their control counterparts. In several instances, substantial differences were computed but the differences were not statistically significant because of the small sample sizes and the wide variation of responses within groups.

The greater differences noted between the upper grade pupils (e.g. second and third grades) support the earlier contention that pupils develop a progressively more positive attitude about school the longer they have been in the HEP program. Furthermore, the disparaties in attitudes, particularly between third graders, and the differences noted in ability levels, provide strong support for the postulation that the HEP program utilizes a learning approach that is conducive to learning. The findings further show that given a learning environment that is acceptable to children, pupils of all levels of ability can find school work to be enjoyable.

Table 39. Total Raw Score Means for HEP and Non-HEP Pupils on the Attitude Toward School and School Activities Inventory

Type of School	Classroom Organization	N	T-Mean	Adjusted Means	F-Value
Kindergarten:					.399 (NS)
Installation	3/2	70	31.33	31.26	
Installation	SC	83	30.40	30.23	
Pilot	3/2	13	30.85	31.78	
Pilot	SC	8	33.38	32.42	
Field	3/2	11	31.64	31.34	
Control	3/2	35	31.40	31.71	
Control	SC	39	30.67	30.84	
First Grade:					2.005 (NS)
Installation	3/2	64	31.92	31.91	
Installation	SC	13	33.23	33.34	
Pilot	3/2	17	35.47	35.42	
Pilot	SC	15	30.87	30.90	
Field	3/2 and SC	12	33.33	33.68	
Control	3/2	35	31.17	30.82	
Control	SC	45	31.84	32.02	
Second Grade:					.058 (NS)
Pilot		14	33.64	32.59	
Field		17	32.53	32.04	
Control		36	31.31	31.95	
Third Grade:					7.398**
HEP		26	30.62	29.82	
Non-HEP		28	24.29	25.03	

NS No significant differences among groups at the .05 level

** $p < .01$

Table 40. Comparison of HEP and Non-HEP Pupils on the Attitude Toward School and School Activities Inventory By Ability Groupings

Grade Level/Ability Subgroup		HEP	Non-HEP	F-Value
Kindergarten:	High Group			
N		63	20	
T-Mean		31.33	31.15	
Adjusted Mean		31.31	31.21	005 (NS)
	Medium Group			
N		77	28	
T-Mean		32.08	31.04	
Adjusted Mean		32.04	31.14	.440 (NS)
	Low Group			
N		45	26	
T-Mean		28.62	30.88	
Adjusted Mean		28.49	31.12	1.947 (NS)
First Grade:	High Group			
N		36	25	
T-Mean		32.89	31.60	
Adjusted Mean		33.19	31.17	2.854 (NS)
	Medium Group			
N		46	27	
T-Mean		32.57	32.52	
Adjusted Mean		32.69	32.31	.086 (NS)
	Low Group			
N		39	28	
T-Mean		32.28	30.57	
Adjusted Mean		32.16	30.74	.912 (NS)
Second Grade:	High Group			
N		5	18	
T-Mean		35.20	31.89	
Adjusted Mean		35.13	31.91	1.346 (NS)
	Medium Group			
N		14	13	
T-Mean		33.71	32.54	
Adjusted Mean		33.60	32.66	.144 (NS)
	Low Group			
N		12	5	
T-Mean		31.33	26.00	
Adjusted Mean		29.90	29.44	.011 (NS)
Third Grade:	High Group			
N		7	17	
T-Mean		31.14	23.76	
Adjusted Mean		29.72	24.35	3.572 (NS)
	Low Group			
N		19	11	
T- Mean		30.42	25.09	
Adjusted Mean		30.13	25.59	3.604 (NS)

NS: No significant difference among groups at the .05 level.

c. School Attendance

Another possible source for determining interest and motivation toward school was the daily attendance of pupils in schools. It was the assumption that the rate of absenteeism provides some indication as to whether pupils enjoy going to school.

The number of days absent from school were tabulated for 85 Field school, 97 Pilot school, 336 Installation school, and 321 non-HEP control pupils. All pupils were part of the sample groups selected for the evaluation of HEP. Data was collected as of May 10, 1971.

The data in Table 41 reveal that overall, control school sample pupils were absent from school an average of about four days less than experimental children (grades K-3). Between grade levels, the greatest differences were between kindergartners in both average number of days absent and range of days absent. The disparities between first and third grade HEP and non-HEP pupils were relatively small. Between second graders, HEP Field school pupils had the lowest range of days absent, while non-HEP school children had the highest range. In terms of averages, however, the reverse was true.

The results also show that the average number of days absent by pupils in all four types of sample subgroups exceeded the State overall grades K-6 mean. Control school kindergartners came the closest to matching the average of their counterparts throughout the State.

Interestingly, the kindergartners and first graders in Installation schools averaged the least number of days absent among HEP children. The findings thus may be a reflection of the "Hawthorne Effect" presented by the new English program.

Table 41. Average Number of Days Absent by HEP and Non-HEP Pupils

Grade	Type of School	Number of Students	Range Low	Range High	Average No. of Days Absent
K	Field	19	0	89	23.6
	Pilot	36	0	75	16.1
	Installation	228	0	44	12.5
	Control	116	0	30	8.9
1	Field	19	0	38	13.2
	Pilot	37	0	44	12.8
	Installation	108	0	42	10.1
	Control	114	0	46	9.1
2	Field	21	0	24	8.9
	Pilot	18	0	33	7.6
	Control	53	0	41	7.1
3	Field	26	0	35	9.3
	Pilot	6	0	34	9.8
	Control	38	0	30	7.9
All Grades	Experimental	518	0	89	12.2
All Grades	Control	321	0	46	8.5
1970-71 State Means	K	13,450			8.7
	1-6*	87,432			5.8
	K-6*	100,882			6.2

*No breakdown by individual grade levels for grades 1-6 are available.

The results shown in Table 42 reveal that aside from a few kindergartners in Field and Pilot schools with extreme numbers of days absent, the differences were generally minimal. The findings further reveal that most of the pupils were absent between one to ten days in both HEP and non-HEP schools.

It is also interesting to note in Table 42 the percentage of students, particularly third graders in HEP schools and other pupils in Field schools, who were not absent from school at all during the entire school year. Although the overall percentages of HEP and non-HEP students who were not absent from school were about the same (4.6% and 4.3% respectively), the greater percentage of HEP students who had perfect school attendance during 1970-71 were those who had experienced HEP the longest. That is, 9.4% of Field school children (four years experience) had perfect attendance, while 4.1% and 3.5% of Pilot (two years exposure) and Installation (first year) school pupils respectively also were not absent during the entire year.

Table 42. Percentage of Number of Days Absent by HEP and Non-HEP Pupils

Range of Days	Kindergarten				1st Grade				2nd Grade			3rd Grade		
Absent	F	P	I	C	F	P	I	C	F	P	C	F	P	C
0	5.2	2.7	2.6	3.4	10.5	2.7	5.5	2.6	4.7	5.5	7.5	15.3	16.6	5.2
1-10	26.3	36.1	55.2	57.7	31.5	62.1	55.5	64.9	57.1	55.5	64.1	57.6	50.0	71.0
11-20	26.3	41.6	30.2	23.2	36.8	24.3	25.0	18.4	33.3	16.6	22.6	11.5	16.6	15.7
21-30	21.0	13.8	16.6	8.6	10.5	8.1	6.4	9.6	4.7		1.8	11.5		5.2
31-40	5.2	5.5	2.1		10.5	8.1	3.7	.8		5.5		3.8	16.6	
41-50			.4			2.7	.9	1.7			1.8			
51-60														
61-70	5.2													
71-80		2.7												
81-90	5.2													

The significance of the above findings surfaces in the comparative analysis of test data between HEP and non-HEP pupils. The number of days absent from school, considered in conjunction with the differences in ability levels between the two sample groups, may have had significant bearing on the expected outcomes on the various measuring devices.

7. Summary of Comparative Study Between HEP and Non-HEP Pupils

A compilation of all test results between HEP and non-HEP children was made for all measures where mean scores were available. When analyses were made on the results on all four major language skills strands, the findings show that HEP children in all grade levels had higher raw score means on 74 comparisons, whereas the control group scored better on 73 occasions. The HEP children performed as well or better than non-HEP pupils in three of the four major skills areas (reading, writing, and listening), while the non-HEP did better in the speaking skills. Table 43 reports the findings.

Table 43. Summary of Comparative Data Between HEP and Non-HEP Pupils in the Four Major Language Skills Strands

Language Skills Strands	Frequency of Group Favored									
	Kindergarten		First Grade		Second Grade		Third Grade		Total	
	HEP	Non-HEP	HEP	Non-HEP	HEP	Non-HEP	HEP	Non-HEP	HEP	Non-
Reading	3	0	3	0	4	8	7	1	17	9
Writing*			8	1	4	1	0	3	12	5
Listening	4	5	6	3	3	2	0	3	13	13
Speaking	13	14	15	12	0	15	4	5	32	46
									74	73

* Kindergarteners were not administered this test.

The lower achievement gains made by HEP children in some skills may be a function of the effects of the late delivery of HEP materials to classrooms, the incomplete installation of some programs (e.g. listening/speaking), and the use of prototype materials in the second and third grade classes. Unable to enter the program until mid-year because of the delays in delivery of materials, and unable to enter some of the programs because of incomplete installations, the HEP children were not able to take full advantage of the new Skills subprogram.

The poor performances by second and third grade HEP students in the speaking/listening skills areas can probably be attributed to the fact that many of the advanced levels in the speaking/listening subprograms were not fully developed until late in the school year. The accelerated installation of the HEP program, mandated by the State Legislature, directed the major efforts of program planners to the statewide installation during the past year. As a consequence many of the advanced materials used in the speaking and listening strands were still being field-tested. The second and third grade students, therefore, in Field and Pilot schools were using prototype materials which needed further modifications and revisions. These second and third graders used for the sample groups, thus, were never fully exposed to the completed programs during the past school year.

When comparisons were made by ability groupings, the results show that the HEP high and medium ability subgroups had higher raw score means more often than their respective non-HEP counterparts, while the non-HEP pupils were mildly favored between the low ability pupils. HEP high ability children had higher raw score means 20 times as compared to 19 times for non-HEP pupils. Between the medium subgroups, HEP students scored higher 15 times as compared to 13 times for the non-HEP. Between the low ability subgroups, HEP children had higher raw score means 19 times, while the non-HEP pupils had better scores on 20 occasions. Table 44 reports the data.

Table 44. Summary of Comparative Data Between HEP and Non-HEP Pupils by Ability Groupings

	Frequency of Groups Favored					
	High Group		Medium Group		Low Group	
Grade Level/Areas	HEP	Non-HEP	HEP	Non-HEP	HEP	Non-HEP
Kindergarten:						
Listening	1			1	1	
Speaking	3		3		1	2
SCAMIN	2	1	1	2	1	2
Attitude Toward School and School Activities	1		1			1
Subtotal	7	1	5	3	3	5
First Grade:						
Writing	1		1		1	
Listening	1		1			1
Speaking	3		3			3
SCAMIN		3	1	2	2	1
Attitude Toward School and School Activities	1		1		1	
Subtotal	6	3	7	2	4	5
Second Grade:						
Reading		2		2	1	1
Writing	1		1		1	
Listening		1	1		1	
Speaking		3		3		3
SCAMIN	1	2		3	1	2
Attitude Toward School and School Activities	1		1		1	
Subtotal	3	8	3	8	5	6
Third Grade:*						
Reading	1	1			2	
Writing		1				1
Listening		1				1
Speaking		3			3	
SCAMIN	2	1			1	2
Attitude Toward School and School Activities	1				1	
Subtotal	4	7			7	4
GRAND TOTAL	20	19	15	13	19	20

* No medium groups were stratified between third graders.

To determine the performances of children in three-on-two classrooms as compared to those in the self-contained, tabulations were made comparing the performances of children within groups and between groups. The results are shown in the table below.

Table 45. Summary of Comparative Data Between Three-on-Two and Self-Contained HEP and Non-HEP Pupils

	Frequency of Groups Favored*						Percentage of Groups Favored**			
	Pilot School		Inst. School		Control School		3/2 Classes		SC Classes	
Grade	3/2	SC	3/2	SC	3/2	SC	HEP	Non-HEP	HEP	Non-HEP
Kindergarten	1	4	5	3	4	4	38.4	61.5	46.1	53.8
First Grade	6	3	5	4	1	8	94.4	5.5	38.8	61.1

* Comparisons were made within groups (e.g. 3/2 Pilot vs. SC Pilot). No comparisons were made for Field schools because of the small sample size.

** Comparisons were made between groups (e.g. HEP vs. Non-HEP) within a particular type of classroom (e.g. 3-on-2).

The results shown in Table 45 reveal that among kindergarteners, pupils in three-on-two classrooms performed better than their counterparts in self-contained rooms in Installation schools, while the reverse was true in Pilot schools. No differences were noted among control non-HEP children. Pupils in three-on-two settings in Installation schools had higher raw score means on five comparisons, whereas self-contained students performed better on three occasions. In Pilot schools, there were four occasions where self-contained students performed better as compared to only one time in three-on-two classes.

Among first graders, HEP children in three-on-two classes did better in both types of schools, whereas the self-contained students similarly performed better in control non-HEP classes. In the Pilot schools, the three-on-two pupils had higher raw score means on six occasions, while the self-contained children had the advantage on three. Among Installation school children, the three on-two did better five times as compared to four by the self-contained pupils. In contrast, three-on-two children in non-HEP classes could score higher only on one occasion as compared to eight times by the self-contained.

The comparisons between HEP and non-HEP pupils in both types of classrooms, as shown in Table 45, reveal that non-HEP kindergarteners had higher raw score means in both the three-on-two and self-contained classes. The ratios of differences were approximately one-third to two-thirds in three-on-two classes, and about fifty to fifty in the self-contained.

Between first graders, on the other hand, children in HEP three-on-two classrooms held an overwhelming advantage over their non-HEP counterparts, while non-HEP pupils were favrord in the self-contained at about a one-third to two-thirds ratio.

It should be noted, however, that it was difficult to accurately compare the performances of HEP children in the three-on-two with those in the self-contained classrooms because the delivery of materials to self-contained classes were considerably later than those to three-on-two rooms.

All scores were also grouped together by grade levels to make overall comparisons between HEP and Non-HEP pupils on all measures. Table 46 lists the summary of comparative data for each of the four grade levels. Appendix 14 lists all comparisons made between HEP and non-HEP pupils.

Table 46. Summary of Comparative Data Between HEP and Non-HEP Pupils

	No. of Measures	No Significant Differences Noted	Frequency of Group Favored HEP	Non-HEP
Kindergarten	6	70	33	45
First Grade	7	74	55	32
Second Grade	8	52	21	38
Third Grade	8	29	19	18
Totals	29	225	128	133

The data in Table 46 show that overall, HEP children performed higher than non-HEP pupils in 128 of the comparisons, whereas the non-HEP had higher raw score means in 133 instances. There were no significant differences at the .05 level noted in 225 comparisons. Significant differences favoring HEP children were noted eight times, while significant differences favoring non-HEP pupils were also noted on eight occasions.

By grade levels, the findings reveal that first and third graders in the HEP program performed better than their non-HEP counterparts, whereas the reverse was true between the kindergarten and second grade groups. Among HEP students, first graders had the biggest advantage over their control counterparts, while among the non-HEP, the second graders made the most prominent gains over their HEP counterparts. HEP kindergarteners had higher scores in 33 comparisons, while the non-HEP similarly had better scores 45 times. Between first graders, HEP children were favored 55 times while control pupils held the advantage on 32 occasions. For second graders, HEP pupils had better scores on 21 comparisons, whereas the same was true for non-HEP students in 38 instances. Between third graders, there were 19 comparisons favoring HEP children and 18 instances favoring non-HEP pupils.

Overall the foregoing findings suggest that the progress in learning of children in the HEP program, particularly in the areas of reading, writing, and listening may be considered as being substantial when viewed in light of the major setbacks encountered in the statewide installation of the program (delays in delivery of materials, incomplete installation of some programs, and problems with defective materials) and the differences noted in ability levels between the experimental and control groups. Although the comparisons favored HEP children only mildly in three of the four skills areas and in the ability subgroupings, the large number of statistically non-significant differences between the experimental and control groups and the achievement gains made by HEP pupils reflect accomplishments over a relatively shorter period of time and under more demanding circumstances.

The results on the analyses on performances in three-on-two and self-contained classrooms further suggest that overall children in the HEP program in the multi-grade, multi-teacher learning environment performed better than their counterparts in the self-contained settings. However, the significance of this is difficult to accurately assess in the light of the later deliveries of HEP materials to self-contained classrooms and the results among non-HEP three-on-two and self-contained classes. Pupils in non-HEP classrooms performed better in the self-contained classrooms as compared to those in three-on-two.

8. Attitudes About the Program

a. Language Skills Questionnaire

A questionnaire to assess attitudes and opinions about the Hawaii English Language Skills program was distributed to school personnel in the field in May, 1971. A total of 145 school principals and classroom teachers from the sample classrooms and all, Installation teachers were polled in this survey. Table 47 below shows the number of people responding by type of school.

Table 47. Number Responding to Language Skills Questionnaire by Type of School

	Field Schools	Pilot Schools	Inst. Schools	Remote Area Schools	Totals
Principals	2	5	27	2	36
Installation Teachers	2	7	31	7	47
Classroom Teachers	17	25	64	3	109
Totals	21	37	122	12	192

By and large those surveyed represented a wide range of the Department's elementary school personnel. The majority of them were well qualified in terms of professional training and were more than adequately experienced in teaching at the elementary level.

Of the 109 classroom teachers, 84 or 77% had obtained at least five years of professional training.* The average number of years of teaching experience was 9.6 years, ranging from six months to 26 years of experience. Two teachers did not respond to the item.

All but one of the 36 school principals had a minimum of five years of professional teacher training prior to entering the administrative field. They averaged 8.1 years of teaching experience at the elementary level, with a range from no experience to 38 years of experience. One principal failed to respond to the question.

Over 89% of the Installation Teachers had a minimum of five years of professional teacher training and the average number of years in elementary teaching was 11.3 years. The range was no experience to 29 years of experience.

Although most of the classroom teachers were trained and experienced at teaching at the elementary school level, only 25 or 24% had taught the HEP Language Skills program prior to 1970-71. All but one were in Field and Pilot schools. Similarly, only slightly over one-half (55%) of the Installation teachers had any experience in teaching in the Skills program. None of the school administrators had actual teaching experience with the Skills program.

In terms of professional improvement, all but two (one administrator and one classroom teacher) of all school personnel surveyed were currently enrolled in or had taken professional coursework as recently as the 1968-69 school year. However, 24 or 22.8% of the classroom teachers did not attend the HEP two-week district workshops conducted by Installation Teachers. Four classroom teachers failed to respond to the question. By contrast, however, all but three of all those polled indicated it is essential that teachers receive special training before initiating the new HEP program in classrooms. Two classroom teachers felt otherwise and a third gave no response. The foregoing data thus reveal that for the most part, the majority of respondents had a new and unique experience in implementing this new English program in the State's schools.

Positive acceptance of the new HEP Skills program was revealed when those surveyed were asked whether they would choose to teach the Skills program in a new school if given a choice. All principals and Installation teachers answered affirmatively. Of the classroom teachers only five indicated they would not, while five others gave no response, and one answered with a qualified "yes" and "no" response. All others indicated that they would prefer to teach in the HEP program.

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* Includes the master's degree, 5th-year Teaching Diploma, the Professional Teaching Certificate, and one doctorate.

In another item, some degree of carryover value in the teaching methodologies inherent in the Skills program became apparent when 18% of the classroom teachers stated that the HEP program had very much changed their way of teaching other subject areas. Another 65% indicated the new program had changed their teaching techniques somewhat, while about 16% of the teachers felt the program had not changed their teaching styles adversely. Two others failed to respond to the item.

In one portion of the questionnaire, respondents were asked to rate various aspects of the new program. There was almost universal agreement among those surveyed that the individualized nature of the program was the most positive aspect of the program. All but one administrator and all Installation teachers rated the individualization aspect of the program as very favorable or favorable. The one school principal who was not in agreement chose to rate the item in the "neutral" category. Of the classroom teachers, all but seven rated individualization favorably. Only one teacher indicated that the individualization aspect was unfavorable, while four were neutral and two were uncertain in their evaluations.

The variety of materials category of the new program was rated almost as favorably as individualization. All but one Installation teacher rated this aspect of the program favorably, while all but two administrators similarly felt that the variety of materials was a favorable aspect of the program. All three in the foregoing, who were not in agreement with their colleagues, indicated neutrality in their ratings. Six classroom teachers felt that the variety of materials was an unfavorable aspect of the program while four teachers were neutral and one did not respond. All other classroom teachers rated this phase as very favorable or favorable.

In terms of the specialized training required of teachers for the Skills program, the majority of classroom teachers, administrators, and Installation teachers held favorable attitudes. All Installation teachers except three rated the training program as very favorable or favorable. One installation teacher was uncertain and two others gave no response. One administrator had neutral feelings toward the special training program, another was uncertain, and two more did not respond to the item. All other school principals rated the training program as either very favorable or favorable. The classroom teachers, however, were not as enthusiastic about the special training required. Two teachers rated the training program as being unfavorable, 20 were neutral, three were uncertain, and two more failed to respond to the item.

Classroom teachers were not as positive, although the majority were quite favorable, to the self-direction and student interest aspects of the program. Six teachers rated the self-direction phase as unfavorable, while 11 were neutral, three were uncertain, and two did not respond. All other teachers held favorable attitudes toward the self-direction portions of the Skills program. Similarly, all teachers except 30 rated student interest in learning as very favorable or favorable. Of the 30 who disagreed, only two opined that it was unfavarable, while 21 were neutral, six were uncertain, and another rated the category as both favorable and unfavorable.

In four other items related to staff and staff management activities, ten teachers felt the number of teachers required in the program (3-on-2 and self-contained) was unfavorable while 18 others were neutral in their attitudes, three were uncertain, and seven did not respond. The others rated the staff size as being favorable or very favorable. Administrators held similar views. Only one principal rated this category as being unfavorable, whereas five were neutral, one was uncertain, and another did not respond. All the other administrators rated the category favorable. The Installation teachers were almost in complete agreement. Two I.T.s rated staff size as being unfavorable, five were neutral, one was uncertain, and two did not respond. The others held favorable attitudes toward the program.

In terms of program administration, six classroom teachers rated the administrating of the program as being unfavorable while 24 were neutral, and one did not respond. Twenty teachers felt that the record-keeping chores were unfavorable, whereas 15 were non-commital, and another failed to respond. Twenty teachers similarly indicated that the planning time available was unfavorable, while 22 were neutral, and fourteen failed to respond. All other teachers rated the three categories as being very favorable or favorable.

School principals were not as positive in their opinion of the three foregoing categories. One, three, and three administrators rated the three items as being unfavorable respectively. Five principals each were neutral while six were similarly neutral toward the record-keeping aspect. One principal was uncertain about the teacher planning phase while four, three, and five others respectively did not respond to the items.

Only one Installation teacher each held unfavorable feelings toward the record-keeping chores and planning time provided, whereas seven, two, and eight I.T.s were neutral respectively. Only one Installation teacher was uncertain about the teacher planning time and three others failed to respond to the administration and record-keeping portions of the survey.

Almost all of those surveyed felt that the use of students as tutors was a positive element of the Skills program. Only one administrator and 11 classroom teachers indicated that the student tutoring system was unfavorable. Four Installation teachers, seven principals, and 16 classroom teachers had neutral attitudes about the system while only five were uncertain. One Installation teacher and three classroom teachers did not respond to the item.

In two other related items, only six classroom teachers felt that the diagnostic process was unfavorable, whereas nine and 22 teachers respectively had neutral feelings about the use of programmed materials and the diagnostic system. Five and six teachers respectively were uncertain about these two aspects of the program, while one teacher did not respond to the programmed materials item.

None of the administrators and I.T.s had unfavorable attitudes about the programmed materials and diagnostic process categories, but six principals and two I.T.s were neutral in their commitment to the use of programmed materials while only one principal and three I.T.s were uncertain about the diagnostic process. One teacher and one administrator did not respond to the former, and three classroom teachers and three principals did not respond to the latter item.

Generally almost all concerned felt that the system of permitting students to make their own decisions about learning was quite favorable. Only four teachers each rated the student involvement in decision-making and the teacher role in guidance categories as being unfavorable. Nine classroom teachers, three administrators, and three I.T.s had neutral attitudes about the teacher's role, whereas one administrator and two classroom teachers were uncertain. One principal and four teachers did not respond. Nine teachers and two administrators were neutral while only two administrators were uncertain about the student decision-making processes. A total of seven administrators and classroom teachers did not respond to either items.

In relation to relevancy of the HEP program content to real-life activities, most of those polled indicated that the HEP program did in fact correlate with the demands of everyday life. Twelve classroom teachers and one principal, however, had unfavorable opinions about this facet of the program, whereas 25 classroom teachers, 11 principals, and nine I.T.s were neutral in their commitment. Two teachers and one administrator were uncertain, five teachers and two administrators did not respond, and one teacher rated this portion of the program as being both favorable and unfavorable.

The final item in this portion of the questionnaire dealt with the various room arrangements suggested for the Skills program. Five classroom teachers and one principal indicated that this phase was unfavorable while 24 teachers, four administrators, and three I.T.s were neutral. Only one classroom teacher was uncertain and only two others failed to respond to the item. All others rated the room arrangement suggested for the new program as being very favorable or favorable.

Overall, the Installation teachers had the most positive attitudes about the various aspects of the Skills program, while the first-year classroom teachers in installation schools were the most uncertain or held neutral opinions about the different facets of the program. Record-keeping and teacher planning time were rated most often as being unfavorable, whereas individualization was rated as the most favorable.

By groups, the classroom teachers rated individualization and the variety of materials as being the most favorable aspects of the program, whereas record-keeping and planning time were rated most of the time as being unfavorable. Among school administrators, individualization and use of programmed materials ranked as the most positive aspects, while record-keeping and teacher planning time were rated as the most negative. Installation teachers rated four categories as being most favorable and without any negative ratings: individualization, specialized training for teachers, self-directed learning, and student involvement in learning. No category received unfavorable ratings of any significance, but neutrality was indicated significantly in three areas: administration of HEP, teacher planning time, and relevancy to real-life activities (marked 7, 8, and 9 times respectively).

In another portion of the questionnaire school personnel surveyed were asked to indicate whether the HEP program was successful with the various types of learners in school. Table 48 reports the responses given by the classroom teachers, school principals, and Installation teachers.

Table 48. Degree of Success with Various Types of Learners

	Very Successful			Fairly Successful			No Help			Harmful			Uncertain			No Response			Not Applicable		
	T	A	IT	T	A	IT	T	A	IT	T	A	IT	T	A	IT	T	A	IT	T	A	IT
Academically Gifted	64*	24	39	25*	8	5	6*		1				2	1	1	2	3	1	12		
Average	33	23	38	72	11	8	2									2	2	1			
Culturally Deprived	6	6	20	57	18	25	11	1		7			17	8	2	3	3		8		
Non-English Speakers	5	4	13	30	9	28	11	4		1			12	11	6	4	7		46	1	
Emotionally Disturbed		1	9	23	10	13	18	3	2	10	1		32	14	23	4	7				
Academically Retarded		1	7	24	9	20	28	3	2	5	1		26	16	17	3	6	1	23		

*One respondent rated all three categories

Key:
T - Teachers
A - Administrators
IT - Installation Teachers

The findings in Table 48 reveal that classroom teachers, school principals, and Installation teachers generally held the opinion that the Hawaii English Program was of some success with all six types of learners listed--the greatest degree of success being with the academically gifted and average ability pupils. On the average, less than one percent of those polled felt that the new English program was of no help or was harmful to students. On the other hand, about 20% felt that the program was not successful with the academically retarded, while about 18% indicated that the emotionally disturbed students were not benefiting from the program.

In two related questions, those surveyed were asked to indicate whether the peer-tutoring system was helpful to pupils who were tutored and to pupils who served as tutors. Table 49 reports the findings.

Table 49. Effects of the Peer-Tutoring System

	Usually			Sometimes			Not Usually		
	Tchrs	Adm	ITs	Tchrs	Adm	ITs	Tchrs	Adm	ITs
Benefits to pupils being tutored	49	27	38	56	9	9	4		
Benefits to pupils doing the tutoring	55	24	38	52	11	9	2	1	

The data in Table 49 shows that there was almost unanimous agreement among those surveyed that the peer-tutoring system was beneficial not only to those being tutored, but also to pupils who served as tutors. Thus the opinions of classroom teachers, school administrators, and Installation teachers support the contentions made by program planners that the tutoring system is an inherent learning experience within the Hawaii English Program. The findings further disspell the old notion that primary-age children are not mature enough or are capable of becoming actively involved in the peer-tutoring processes.

In another portion of the questionnaire those polled were asked to indicate whether they were in agreement with various philosophical assumptions inherent in the new Language Skills program. The findings on four related items regarding individualization of learning support the earlier data that the Hawaii English Program is conducive to and favorable towards meeting the needs of school children. Over 93% of the classroom teachers, school principals, and Installation teachers indicated that children as early as the kindergarten level can and do benefit from reading activities in HEP, and similarly that gifted children have the opportunity to progress at their own rate in the HEP program. In addition, over 61% indicated that the individualized nature of the Skills program reduces the need for student retention in the same grade. Only about 8% felt otherwise while about one-fourth of the respondents were not sure. The data thus suggest that the traditional practices of requiring all primary children (e.g. kindergarteners) to go through readiness activities may not be the most efficient or the most beneficial approach to learning. The Language Skills program, on the other hand, apparently offers a more individualized system for learning, as evidence by the responses of the school personnel.

When asked whether the combining of kindergarteners and first graders in the same classroom limited the progress made by the older children, close to 86% of the respondents felt that the K-1 multiple grade combinations did not hamper the learning progress of the first graders. On the other hand slightly more than 31% of the respondents felt that a grades K-2 combination was too large an age span for effective learning to take place. However, it should be noted that 27% of those surveyed were not certain as to whether the age span made a difference--these responses apparently reflecting the feelings of those who did not experience this classroom organization (only some Field and Pilot schools field-tested HEP in K-2 and K-3 classrooms; over 55% of the respondents who were not certain were from installation schools where only K and K-1 combinations were in existence).

In a related item, slightly more than one-half of the respondents felt that the three-on-two classroom organization is better suited for the Language Skills program. Almost one-third were not sure--possibly reflecting the viewpoints of those having only taught in self-contained classrooms. Sixteen percent of those disagreeing with the above indicated that they were experiencing some degree of success with HEP in self-contained classrooms.

The traditional assumption that primary-age children have short attention span is apparently disspelled by the opinions of those surveyed. Over 75% of the respondents indicated that kindergarteners can work in language development activities for over 20 minutes at a time, while only about 12% disagreed and another 12% were uncertain. The data thus suggest that the HEP Skills program is motivating and stimulating to those actively involved in it.

In a related item, slightly more than one-fourth the respondents felt that the first graders should not be allowed to go for more than two days without engaging in some form of reading activity. These respondents apparently still have strong feelings about preparing pupils for reading at the first grade level, whereas the other 58% who disagreed similarly feel that the Skills program offers other learning options that are equally important.

Further support for the individualized elements of the new Skills program, and a dramatic shift in the viewpoints of elementary school personnel, is evidenced by the data from three related items. The results reveal that over 71% of the respondents were in the opinion that pupils are likely to progress more rapidly in language skills development when given the opportunities to choose their own work, while only about 6% felt otherwise and another one-fourth were uncertain. Furthermore, the responses shows that over 91% of those surveyed felt that the children gain through self-selection of learning activities, while only two percent disagreed and the rest were uncertain. In addition, there was almost unanimous agreement that the children were capable of and responsible enough to handle their own progress/achievement records.

With respect to the tutoring system, the majority of those polled felt that the gains accrued from peer-tutoring outweigh the disadvantages, and that kindergarteners and first graders are not too young to handle such a complex system. Over 64% of the respondents indicated that older children benefit from tutoring younger children, whereas only 14% disagreed. The rest weren't sure. In addition, over 78% of those surveyed did not feel that kindergarteners and first graders were too young to satisfactorily work with each other. Over 78% also felt that there was no great danger in permitting youngsters to teach each other. Only about 7% disagreed with this assumption. Although respondents generally felt that primary children were capable of working with each other, however, slightly more than 45% indicated that the child's performance still needed to be checked by the classroom teacher.

The foregoing findings suggest that while school personnel generally regard peer-tutoring highly, there is still a need for teacher check-points to insure that effective learning is taking place.

The changing role of the classroom teacher in curriculum development and implementation, brought about largely through the new English program, is evidenced by the findings from three related items. Over 93% of the respondents indicated that classroom teachers have a major responsibility in providing data for revisions of new curricular materials. By the same token, over one-half (56%) of the respondents did not feel that strict adherence to the new Skills format during the past school year limited teacher freedom and/or options. Furthermore, the HEP system of reverting the role of the teacher from a "teacher of facts" to a "manager or guide to learning" did not necessarily cause teachers to feel that teaching required less professional competence. Over 82% supported this contention while only about 10% did not. The findings thus suggest that a different dimension in curriculum development and implementation is taking place among school personnel through the mandatory installation of the HEP program in schools throughout the state. Prior to this, the Department of Education's position had been to permit curriculum to be developed and implemented at the local school/district level. The apparent acceptance and success of the new Hawaii English Program, developed and implemented from the State level, may provide the impetus for similar installation approaches in other subject areas.

In view of the new and changing nature of the role of classroom teachers, over-one-half (53%) of the respondents indicated there was a greater personal and professional satisfaction resulting from the involvement with the HEP program. About one-fourth (24%) felt otherwise while about 21% were uncertain in their responses.

Although the new Language Skills program was installed primarily in multi-grade classrooms with larger pupil enrollment, and in light of the individualized approach to learning inherent in the new system, over 65% of those polled felt that the HEP program provided classroom teachers with greater opportunities to know children better than in a traditional setting. Slightly more than 17% indicated otherwise. The HEP record-keeping system and the freeing from "actual teaching" chores are trade-offs that apparently are enabling classroom teachers to work more closely and individually with pupils.

The responses of those surveyed also seem to suggest that positive social development and relationships are taking place among children involved in the HEP Skills program. More than one-half of the respondents (57%) agreed that students in the HEP Skills program get to know other children in the classroom better when compared to similar-age children in other language programs. Only 16% disagreed while the others were not certain or failed to respond. In addition, over 63% of the respondents felt that the children developed more positive self-concepts and were less likely to consider themselves as learning failures when compared to children in other language programs. About 13% indicated otherwise and the rest were uncertain or failed to answer the item.

The foregoing implies that the inherent facets of the new Language Skills program (e.g. individualization, peer-tutoring, multimodal approaches to learning, etc.) are enabling youngsters to experience some degree of success in language development and at the same time permitting them to learn in an environment more conducive to their own physical and emotional nature (e.g. working with peers, progressing at their own pace, etc.).

Finally, in the last item in this portion of the questionnaire, respondents were asked whether they felt more positive about the HEP program than when they first heard about it. Close to 87% agreed that their attitudes toward the new program became more positive after becoming actively involved in it. About 10% disagreed while the others did not respond to the item or were not certain. Thus, the data lends strong support to the contention that the new Hawaii English Program is being widely accepted by those at the local school level. Futhermore, the findings also suggest that classroom teachers can and do accept curricular changes when new programs warrant such support.

Another section of the questionnaire asked respondents to compare the various learning behavior of children in the HEP program with children not in the program. Appendix 15 reports the data, as reported by classroom teachers, school principals, and Installation Teachers.

The data in Appendix 15 clearly reveals that in the opinion of those surveyed, pupils in HEP classrooms overall exhibited behavioral characteristics considered more appropriate than those in non-HEP classrooms in thirteen areas listed.

The findings further reflect the nature of the learning environment in the HEP classroom. That is, HEP pupils become more self-directed because of the individualized freedom offered to them, and have a wider variety of learning modes, materials, and equipment to work with. Over 90% of the respondents indicated that HEP pupils were more competent than non-HEP pupils in recording their own progress, whereas only 3% felt otherwise. Furthermore, over 87% of the respondents felt that HEP pupils were better able to operate the various learning equipment and select appropriate learning activities than non-HEP pupils, while only about 5% and 6% respectively did not agree with the above. Least competent, when HEP pupils were compared with non-HEP students, was the ability to work without disturbing others. Only about 55% of the respondents felt that HEP pupils were able to work without disturbing others better than non-HEP children, while more than one-fourth disagreed. It is interesting to note also that over 80% of those polled felt that HEP children were reading a wider variety of books, while only about 5% indicated otherwise and about 15% were uncertain.

The general conclusion that can be reached from the foregoing findings is that respondents to the questionnaire generally felt that pupils in the HEP program were developing more acceptable behavioral characteristics than those not in the program, and in all probability had greater opportunities to develop these characteristics.

On an attached sheet, respondents were asked for their opinion on five different but related areas to the Language Skills program. In the initial item respondents were asked whether the Skills program caused teachers to put more, the same, or less emphasis on other subject areas. Table 50 reports the results.

Table 50. Emphasis on Other Subject Areas*

	Classroom Teachers				Administrators				ITs				Totals		
	F	P	I	R	F	P	I	R	F	P	I	R	Tchrs	Adm	ITs
Same as previous yrs.	5	5	20	2	1	2	13			2	15	3	32	16	20
More than previous yrs.	4	3	6			3	3		1	2	0		13	6	3
Less than previous yrs.	7	14	31		1		10		1	2	13	4	52	11	20
No response	2	2	7	1		1	1	1		1	3		12	3	4

* "F" refers to Field Schools, "P" for Pilot Schools, "I" for Installation schools, and "R" for Remote Area Schools.

Overall, the respondents felt that classroom teachers put less emphases on other subject areas because of the Language Skills program. Over 43% felt that less emphasis was being put on other disciplines, whereas about 36% felt it was the same as in previous years, and almost 12% felt more emphasis was placed on other subjects.

Analysis of the data by groups reveals that classroom teachers were consistant with the overall results. Administrators, on the other hand, felt the emphasis was the same (46%), less (31%), and more (17%) respectively. The Installation teachers were equally divided in their opinion. About 43% each felt that the emphasis was the same, another 43% felt is was less, and only about 7% felt more emphasis was being placed on other subject areas.

When asked to indicate the type of classroom organization they would choose to implement HEP, and the type of classroom organization that is best for teaching the HEP, the respondents gave the following indications (Table 51):

Table 51. Type of Classroom Organization for HEP*

Preference for Type of Classroom Organization for Implementation:	Classroom Teachers F	P	I	R	Administrators F	P	I	R	IT'S F	P	I	R	Totals Tchrs.	Adm.	IT's
3-on-2	9**	20**	47	3	2	5	26**		1**	6	20	4	79	33	31
Self-contained, multi-grade	3**	1**	4				2**	1			7	3	8	3	10
Self-contained, single grade	3	1	11						1**		2		15		3
No Response	4	3	2			1			1	1	2		9	1	4
Preference for type of Classroom Organization Best for HEP:															
3-on-2	9	20	46	2	2	5	25		1**	6	23	4	77	32	34
Self-contained, multi-grade	5	2	5	1			1	1		1	5	3	13	2	9
Self-contained, single grade	2	1	7						2**		1		10		3
No Response	2	1	6			1	1				2		9	2	2

* "F" refers to Field Schools, "P" for Pilot Schools, "I" for Installation Schools, and "R" for Remote Area Schools.

** One respondent marked two categories

The findings in Table 51 clearly show that the respondents prefer the 3-on-2 classroom organization for implementing the HEP program and felt that the 3-on-2 is best for teaching the HEP. Over 73% and 74% respectively of those surveyed chose the 3-on-2 organization, whereas about 11% and 12% respectively preferred the self-contained multi-grade level organization. Only about 9% and 7% respectively selected the self-contained, singel-grade level classroom organization. The data suggest that the 3-on-2 classroom setting, with a team of teachers and with varying age and ability level children, is more conducive for teaching in an individualized program such as the HEP. The findings further dispell the age-old notions that primary-age children need to work in a small group environment, and that they need to identify with a single adult to effect learning. On the other hand, the fact that approximately one-fifth of the respondents preferred the self-contained classroom setting (multi- or single-grade levels combined) suggests that the effects of the 3-on-2 teaming may have influenced the responses made by those polled. Individual comments listed on the questionnaires support, to some extent, this contention. It should be noted, further, that slightly less than one-half of the classroom teachers had no experience in teaching in the 3-on-2 setting prior to the past school year, whereas only about 28% had one year and only one-fifth had more than one year of 3-on-2 experience.

The final two items on the attachment to the questionnaire asked respondents whether the HEP materials had been helpful for instructional purposes in the 3-on-2 and self-contained classrooms.* Of the eighty-one classroom teachers teaching in the 3-on-2, only two indicated that the HEP materials were not helpful. All the others indicated otherwise. Of the 29 school principals and 42 Installation teachers who responded to the item, all of both groups indicated that the HEP materials had helped with the instruction.

When asked whether the materials were helpful in self-contained classrooms, only one classroom teacher and one administrator indicated that the progrmm materials were not of any help. All of the others who responded, including Installation Teachers, indicated that HEP was of some benefit.

The foregoing findings provide strong endorsement for the Hawaii English Language Skills program. Furthermore, the above data along with the results of the previous analyses on respondent preferences for type of classroom organization for HEP suggest that although the 3-on-2 setting was preferred over the self-contained for using the HEP, classroom teachers in both types of classrooms found success with the program materials.

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* In the case with classroom teachers, only those teaching in the particular classroom settings (3-on-2 and self-contained) were asked to answer the particular question.

In the final section of the questionnaire, respondents were given the option to make additional comments. Both favorable and unfavorable comments were made as well as a variety of suggestions for improving or modifying various aspects of the program.

Favorable comments praised both the Language Skills and Literature subsystems of the Hawaii English Program. Several classroom teachers felt that the program had helped all children, including kindergarteners. Others felt that all grades K-3 children throughout the State should use the HEP program. In addition, some teachers felt that the work of the Installation teacher was instrumental in the success of the HEP implementation, while others were in praise of the record-keeping system. One teacher, furthermore, reported that when she entered the program in mid-year as a participating teacher, children in the classroom were able to help her get oriented to the program.

Among school administrators, one principal indicated she was proud to be involved in the HEP program. Another felt that HEP had contributed much toward the individualization of instruction and had helped teachers move away from outmoded traditional practices.

Installation teachers also indicated that they enjoyed working with the program. In addition, Pilot school Installation teachers felt that the K-3 grouping was highly successful and that the program was much easier to manage during her second year.

Among the less favorable statements, listed most often were comments relating to the adherence of the HEP system that teachers were required to follow. Respondents generally felt there was a need for more flexibility and that teachers should be given the option of modifying the program as they see fit. In contrast to the latter, however, some Installation teachers indicated that too often classroom teachers wanted to deviate from the HEP system without a thorough investigation of the child's problems and without an indepth evaluation of the alternative modes of learning they wanted to use.

Other negative comments related to the group size of the three-on-two classroom. Some respondents felt that the sixty-plus students in the 3-on-2 setting was too large a group for the individualized program of HEP.

First-year participating teachers were also in the opinion that the program lacked adequate activities for the slow and immature children. These respondents noted that there was a need for more readiness or pre-HEP activities. Others felt that the program failed to develop spelling, sentence-writing, and comprehension skills. Furthermore, some felt that more dictionary skills were needed.

Besides the foregoing, respondents also made several other suggestions for improving the HEP system. Among these were: that carbon copies of the reporting pupil progress form be kept, more feedback was needed on some of the subprograms (e.g. listening/speaking programs, dialect variation, etc.), more supervision of student tutoring was needed, a more structured schedule for low ability students is required, more and better quality materials and equipment were desired, earlier delivery of the programs should be made, and more application of some program skills to real-life situations was needed. Installation teachers for remote areas, in addition, felt that better communication between state and school levels was needed,and that replacement cost be borne by HEP.

In summary, then, the overall impact of the HEP program has been quite favorable. Respondents generally were in agreement with the program goals and assumptions, and felt that the program is a step forward in the development of a more individualized elementary language arts program. On the other hand, not all respondents were in complete agreement with all facets of the program and made several recommendations for program modifications. In general, those who were involved with the program for the first time (e.g. Installation school classroom teachers and administrators) had more doubts and concerns about aspects of the program than those from Field and Pilot schools. Installation teachers, who were the most familiar with the program because of the nature of their work and their training background, generally made the most positive responses and comments in responding to the questionnaire.

b. On-Site Interviews and Classroom Observations

This section of the evaluation summarize the comments made by classroom teachers, school administrators, Installation teachers, and district HEP coordinators during two formal on-site visitations held in November, 1970, and in May-June, 1971. Also included are summaries of observations made through classroom visits.

Both on-site visitations were made by the NWREL representative and the evaluation specialist for HEP. The purposes of the earlier visitation were to:

1. Confirm the presence of students selected for both experimental and control samples,
2. Check on the appropriateness of data collection procedures,
3. Observe the system adherence variable,
4. Assess the cooperative relationship between the local school, district, DOE personnel, and HEP personnel, and
5. Observe the impact of the evaluation materials on the HEP, as well as non-HEP teaching/learning environment.

The schools and districts visited in November included:

District	School	Type of School
Kauai	Eleele	Installation
	Kapaa	Pilot
	Wilcox	Installation
Maui	Kahului	Pilot
	Lihikai	Installation
	Waihee	Installation
Maui (Molokai)	Kaunakakai	Field
	Kualapuu	Field
	Maunaloa	Field
Hawaii	Hilo Union	Installation
	Waiakea	Pilot
Honolulu	Kalihi-Uka	Field

The purpose of the on-site visitations at the end of the school year was to determine the impact of the HEP installation and its associated effects on the evaluation efforts. Schools and districts visited during this latter trip included:

District	School	Type of School
Hawaii	Ernest de Silva	Installation
	Holualoa	Installation
	Kealekehe	Installation
	Waiakea-waena	Control
Maui	Kihei	Installation
	Wailuku	Installation
Maui (Molokai)	Kilohana	Field
Kauai	Kekaha	Installation
	Wilcox	Installation
Leeward	Lehua	Installation
	Pearl City	Installation
Windward	Kainalu	Installation
Central	Kaala	Installation
	Wheeler	Installation
Honolulu	Likelike	Installation
	Puuhale	Installation

During the fall visitation, the following recommendations and comments seem to have filtered through:

1. The inservice program for Installation teachers could be expanded to include necessary information for building administrators so that their role in installation and use of the materials could be better differentiated and defined.

2. Several Installation and classroom teachers indicated a desire to establish reasonable procedures that would allow use of collateral materials to be introduced in the HEP program by teachers, based on their intuition and insight as to student needs.

3. Several Installation and classroom teachers expressed a felt need to integrate HEP materials with other subject matter areas.

4. There was almost uniform dissatisfaction on the part of Installation teachers with the problem of equipment maintenance, materials logistics, and an overload of the clerical function.

5. Among the several classroom teachers with whom we talked there appeared to be a need for increased effort in preparing the teachers for the use of HEP materials. Within that general area, the major concern seemed to be with methodology that allows for easy and effective installation of the tutor role for older children.

6. Principals, district personnel, and Installation teachers indicated a need for a comprehensive rationale statement on the HEP materials. This should deal with why each of the areas presented in HEP were selected, an analysis of the various modes of presentation, an overall statement of the guiding philosophy behind HEP, etc.

7. When interviewing Installation teachers and district personnel, it seemed apparent in our evaluation that we needed to attempt differentiation between the impact of the 3-on-2 program and the HEP material. A number of the problems that seem to occur in the classroom with HEP materials could be attributed to poor working relationships within the 3-on-2 team.

8. It was recommended to us by several Installation and classroom teachers that the operating personnel, Installation teachers, principals and classroom teachers have a greater hand in planning the following inservice programs leading to further improvement in the HEP installation.

9. It was pointed out to us at several sites that the physical adaptation of the school buildings themselves were causing some problem with both the 3-on-2 and HEP installation practices. In the HEP area, these problems seemed to center around:

   a. Addition of wall outlets to allow use of necessary equipment

   b. Carpeting on floors as a noise control measure

   c. Removal of walls to provide opening of spaces allowing adequate, suitable space for HEP activities

10. Relative to the teacher inservice program prior to the opening of schools, several administrators pointed out that the combined inservice load of 3-on-2, individualized instruction, HEP Language Skills, HEP Language Systems and HEP Literature Bands, could conceivably require several teachers to begin their preservice training in early August. It was suggested, therefore, that there needs to be some revision of the inservice scheduling and/or administrative area as well as teacher contracts.

11. It was commented at several sites that the sample we had selected for the experimental groups from the Field, Pilot and Installation schools appeared to come from the low end of the ability continuum. This point may require some checking.

12. Several Installation and classroom teachers commented that the HEP materials were inadequate for extremely low ability children on the one hand, and not extensive enough for extremely high level ability children on the other.

13. In the purchase and repair of equipment needed for HEP, an administrative bottleneck seems to have developed in the assignment of purchase order numbers and the paper flow involved.

14. Overall, teacher experience with HEP materials seemed to have been the major factor in confirming their success in the use of these materials. Teachers using the materials for the second year seemed more confident and capable in their use. Therefore, teacher experience is an important variable for us to consider in evaluation of HEP effectiveness.

15. Installation teachers asked for a job description. Depending on the different administrative styles of school principals, Installation teachers were bogged down with various tasks and were not sure whether the responsibilities they were asked to handle were justified. It should be noted that the visitations came at the heels of HEP inventories that were required for the installation packages. Hawaii was the only district where inventories were handled by school principals and therefore Installation Teachers there did not register "complaints." This might be a recommendation for future implementations.

16. There appears to be a need for year-round in-service training programs, particularly for those new to HEP and for those who did not attend the summer workshops. The mainland hires, in particular, appeared to need more background on the philosophy of HEP. In view of this, however, some teachers expressed some resentment at having to attend workshops during their own time (e.g. weekdays--after school, plus Saturdays). Teachers who did not attend the summer district-level workshops appeared to have the most difficulty in adjusting to HEP.

17. Teachers also felt a need for lateral expansion of materials for the slow students.

    Example: Slow students would reach a plateau when working with a particular card stack and were unable to progress in that stack.

18. The Language Skills and Language Systems sections need to coordinate their efforts so that students going from the Skills program will be able to function in the Systems program. At Kahului School, slow grade 4, 5, and 6 students using the Advertising Unit in the Systems program were having difficulty

with the Unit. These slow students, who have difficulty reading (virtually non-readers), could not handle the Advertising Unit. Although students at present were enjoying the unit, they were having reading problems and difficulty in research work. No student using the Systems program had had the Skills program. However, it is conceivable that the "graduating" third graders from this past year (1970-71), who are now in the Systems program this year, may have similar problems. There appears to be a need for further study in this area.

19. Installation teachers and district coordinators asked whether Field and Pilot schools could receive a block of Purchase Order numbers from H. C. C. for Purchase Order numbers needed for repair/replacement work by vendors. This might lead to some savings by H. C. C. as well as reduce "unnecessary" calls--since Purchase Orders have all been approved thus far. The HCC Business Office should review this procedure and make changes in policies appropriately.

20. Some schools had some parental complaints that the HEP report card was difficult to understand. Parents were more interested in standards for grade levels and the achievement levels of their children in comparison with these standards.

21. The evaluation effort was concerned with the impact of the 3-on-2 organization and the effect of it on the HEP program. It appeared that teachers new to both the HEP and 3-on-2 were having more problems in adjusting to HEP. Our evaluation design isolated this variable for study and analysis.

22. It is recommended that the 3-on-2 relationship be included in future training sessions, and that consideration be given in the development of future training programs to help teachers in relating and communicating with each other in team situations. Some Installation teachers also had difficulty in relating to teachers in their new supervisory-administrative role. There may be a need for further training in this area for Installation teachers.

23. Most teachers felt they were not spending enough time in other subject areas (e.g. science, art, etc.) and expressed a concern that with further expansion of the HEP program (e.g. literature) they would not be able to schedule these subjects within the school day as often as they would like to.

24. A number of teachers felt that K students should not be included in a heterogeneous grouping (e.g. with 1st graders), while an equal number felt it made no significant difference. However, since there were a number of teachers who had difficulties with the immature kindergarteners, consideration in future training sessions should include this phase. One suggestion is to have teachers emphasize, at the beginning of the school term, self-discipline and student responsibilities and roles. It appeared

that teachers who stressed these points at the outset did not have problems with the immature pupils.

25. It was gratifying to see one class (Hilo Union) take the initiative and make their own stacks of those that were not delivered. The staff at Hilo Union, in addition, spent all of last year discussing the philosophy of the 3-on-2, and this factor seems to have helped them accept HEP quite readily as well as enable team members to work together quite smoothly. This may be a clue for future team-teaching implementation.

26. Another pleasant experience was at Kualapuu. On the day of the visit, the entire State was in the midst of a rain and wind storm. The children at Kualapuu were all in the classroom during recess and it was quite an experience to watch them engage in games and academic work on HEP materials without supervision or direction. Self-direction was very much in evidence. Pupils were happily relaxing yet very disciplined and quiet.

27. In discussing the roles of the Remote Area Installation teachers and Installation teachers for other rural schools, the district coordinators felt that these positions should be maintained in the future for the following reasons:

    a. Teacher turnover in rural areas is high and there is a need for someone to continuously work with teachers new to the program and state system.

    b. Expansion of HEP in other areas (e.g. Literature, Language Systems grades 4-6, etc.) requires a number or resource teachers (Installation teachers) to work with teachers.

    This may be a consideration for future budgetary purposes.

28. Waiakea School uses intermediate students as teacher-aides for part of the day. This might be a solution for other schools in similar situations with regard to utilization of additional help.

29. Requests for funds for visitations to other HEP classes (e.g. Molokai is isolated and would like to visit other island schools) were made. This probably should be handled internally at the district level.

30. Some principals and district coordinators expressed concern on the effect of legislative mandates (e.g. each school shall have at least one HEP class). These people felt that in certain schools where there is only one class for each grade level, teachers are forced into programs without sufficient orientation to the program.

31. As expected, teams with experienced HEP teachers and/or experienced 3-on-2 teachers were functioning better than those with no experienced teachers.

The report on the second school visitation in the spring is organized into two sections. The first deals with open-ended discussion questions and responses to them. The second presents additional comments and observations.

For the classroom visitations, the following issues were focal points of observations:

1. Teacher records of student progress

2. Student records of student progress

3. Placement and accessibility of HEP materials and equipment in the room.

4. Movement of students between tasks.

5. Operation of planning and evaluation sessions.

6. The spread, frequency, and ease of tutoring relationships.

7. The general atmosphere of the room.

The questions and responses to them for the first section are described below:

Question 1: What has been the effect, if any, on the effectiveness of the HEP program of the dates upon which the materials were delivered?

a) Students had less access to HEP materials than they would have had materials been on time. Self-contained classes had material later than 3-on-2 classes.

b) Materials were received in several deliveries. The problem in this area centered around the sequence of delivery, with more complex materials preceding the introductory units.

c) Indeterminate and late deliveries, and the fact that materials were received out of proper sequence, tended to frustrate all involved. Where negative feelings existed toward HEP, these were reinforced. However, when materials were delivered and were used, the frustrations and negative attitudes toward HEP disappeared and there was a general shift toward positive attitudes about HEP.

d) There was a concern that the workshop and teacher guide emphases on adherence to HEP products were in fact subverted by the requirement that other approaches to language arts be utilized while teachers awaited the late delivery.

e) Some teachers expressed the view that the lateness of delivery allowed time to establish classroom organization and management functions. This, coupled with what can be thought of as the "dribble" delivery, allowed these teachers to familiarize themselves with the HEP program as it arrived. However, all were unanimous in desiring all the material to be available when school opened. Failing this, they desired the date of delivery to be specified so that contingent plans could be made. If the material is to be delivered at several times during the year, the teachers wanted it delivered in the sequence in which it would normally be used.

f) When considering the deferential effect of the late delivery, it was the general opinion of all that the more capable, mature students were most handicapped by late materials--the less mature profited from the extended readiness activities. In general, this handicap was perceived as focusing at the first-grade level.

g) Some respondents indicated that late delivery had generated some pressure to accelerate progress and therefore direct students into reading-based activities. This pressure to compensate for late delivery of HEP protocols stemmed from (a) parents, (b) teachers in subsequent grades, and (c) from the teachers' need to see students experience success in reading.

h) A general concern about future late delivery of material was expressed. Late delivery of materials in subsequent years was seen as very disadvantageous to students already entered into the HEP materials. It was suggested that should future late deliveries be probable, the HEP projects should recommend contingency plans to allow the teachers and students to more fruitfully use the "waiting" time.

i) Lateness of delivery had less of an impact on students in field and pilot schools because these schools were able to use materials delivered in preceding years.

j) Observation, as well as interviewing, indicated that some self-contained classrooms had not, at the time of visitation, received all the materials.

k) Although some of the kindergarteners have experienced HEP for only a half year (especially in self-contained classrooms), teachers still felt they have progressed much more and are more prepared for grade 1 than in previous non-HEP years.

l) According to teachers, the slow-maturing students are just now "blossoming", and had the materials arrived sooner, more progress would have been experienced by these students.

m) According to teachers, children could not utilize all of the aspects of the Listening/Speaking component because of the late delivery in these subprograms. Those who reached plateaus in other subprograms could not use them to an advantage as an alternative option.

n) The organizational/management problems inherent in 3-on-2 teaming were compounded by the delay in delivery of materials.

o) Some administrators expressed their frustration and concern in not receiving more explicit communication regarding the delivery and replacement problems.

p) Some Installation teachers felt an additional strain in helping classroom teachers because of the delay in delivery. Not only did the delay create problems of their credibility with teachers but the ITs spent many hours in trying to find "supplementary" materials during the interim. Furthermore, where field/pilot schools were in close proximity, the ITs spent a good deal of time in transporting "borrowed" materials for the installation classes.

In summary, it is recommended that HEP evaluators adopt the following assumptions:

1) When comparing the experimental installation group with the control group, it should be assumed that the installation group will show poorer achievement than they would have if the materials had been available the whole year.

2) When comparing achievement in the 3-on-2 classes with achievement of self-contained classes using the HEP materials, the self-contained classes will show poorer achievement than they would have if the materials had been available to both organizational forms for the same period of time.

3) In the area of the deferential achievement of the high, average and low ability students, the spread of achievement between high and low ability students will be less because of the late delivery.

Question 2: Has HEP had any effect on instruction in other areas? If so, what?

a) Impact on instructional practices was identified as that of HEP-based techniques (e.g. tutors, record systems, etc.) being introduced into primary arithmetic and other curriculum areas. However, the major direct transfer effect was indicated in arithmetic.

b) Some use of HEP equipment (language masters, film loop projectors, tape recorders) was being made in other areas of primary grade instruction.

c) Teachers reported that using HEP materials made them more physically tired when the program first began, but that as the program became more familiar to both students and teachers, this fatigue factor was reduced. With the reduction of the fatigue factor, teachers reported having more time for planning in the other subject areas, and HEP provided them with teaching methodology concepts to incorporate in the other subject areas. On this basis teachers, primarily those in 3-on-2 teams, generally contended that HEP led to improvement of instruction in other curriculum areas.

In summary, this question indicates that if individualized instruction is an overall educational goal, there are some side benefit payoffs from introducing HEP. There are no direct implications for the interpretation of HEP evaluative data.

Question 3: What opinion or comments do you have on the evaluation activities associated with the HEP program?

a) In general, all respondents felt that the evaluation procedures did not intrude upon or substantially effect the HEP program.

b) Several teachers commented that the randomly selected sample students seem to over-represent the low ability, immature end of the student continuum.

c) One incident of anxiety on the part of teachers whose students were in the HEP sample, and one incident of anxiety on the part of teachers whose students were in control groups, were reported.

In an overall sense, there appeared to be no reason to feel that overtesting had distorted the HEP program. The concern for a biased random sample will be examined when the evaluation data are analyzed, and statistical controls will be applied if bias is discovered. The maximum level of teacher anxiety is seen as having no impact on the evaluation results.

Question 4: Have you noticed any changes in student behavior as a result of HEP?

a) In general, children in HEP appear more comfortable with adults. Teachers seem to be viewed by students as aides to learning instead of authoritarian directors of learning; other adults in the classroom identified as teachers were also seen as aides to learning.

b) Students are more "self-directed" in that they wisely choose a balance of material and alternatives in pursuit of their learning. Although this opinion was generally held, there was a variation in specific cases that questioned the wisdom of choices made by some students, and there was variation in the degree to which some teachers felt that teacher guidance in the student selection was needed. Some, but not all, reported evidence that the self-direction carried over into out-of-classroom and out-of-school activities.

c) Students were reported as more willing to help and be helped by other students. Some evidence was presented to indicate that this carried over to non-HEP activities.

d) Students were reported as being happier. There were several exceptions reported. Observation in the classroom visited seemed to confirm the general report and deny the exception.

e) It was generally reported that some students tended to stay in at recess and come early to school so they could work longer with HEP materials. This work took the form of individual practice and in tutoring relationships. This phenomena was confirmed by observation in the classroom visited.

f) It was reported that there were fewer behavior problems in the classroom. Discussion of this comment indicated that it was based on two phenomena: (1) there was a shift in teacher expectation for student behavior, and student behavior that had been previously characterized as a problem was now accepted as appropriate, and (2) there were real changes in student behavior that reduced the incident of student behavior problems. The discussion and observation of classroom behavior led the observers to conclude that the greatest change was of the second type mentioned above.

g) Several teachers reported that students generally seemed to have an improved self-concept. This improvement seemed most concentrated at the lower end of the maturity-ability continuum.

h) Several interviewees indicated that the tutoring relationships and HEP procedures helped to break down the social clique, social isolate structures that had been present in previous classes.

In summary, the reported impact of HEP on student behavior seems to be consistent with what would be expected in terms of the HEP program design objectives.

Question 5: Have you been able to detect effects of defective materials or equipment on any or all HEP programs? If so, what has been the effect?

a) A list of the reported defects follows:

(1) Plastic stack rods were breaking

(2) Film loops were sticking and burning; film loop models of cursive writing moved too quickly and don't indicate the lines on the writing paper

(3) The surface of pages in typing books tore when used with stickers

(4) The laminated writing books didn't wipe clean

(5) The recording tapes on the language master cards lost the accuracy and clarity of the recording

(6) The spiral binding on some student materials tore through bound pages

(7) The paperbound books and some of the hardbound books in the instructional library deteriorated too quickly

(8) Tape cassettes tangled often

(9) Cassette recorders broke down

It should be noted that the observers cannot affirm or deny the reported defects; they can only state that they were reported. These reports are cited here only as a basis of the comments to follow.

b) Teachers reported that they were frustrated and annoyed by the defects. When asked whether it would be better to expend additional funds to increase the quality of materials and decrease the defects, or to increase the quantity and scope of HEP materials; a significant number indicated they would prefer to increase the scope and quantity of materials. However, the majority wished for higher quality materials.

c) In some cases defective materials (e.g., film loops) made one alternative unavailable or ineffective to a HEP program (e.g., handwriting). Where the material was unreliable because of defects, students tended not to select that alternative and teachers hesitated to encourage students to choose the option.

d) Teachers reported some concern at not being able to follow HEP protocols because of defective materials.

e) The defective materials discussion was interwoven with a general concern to establish more responsive and faster equipment repair and maintenance systems.

f) Administrators expressed concern for the high cost for replacements anticipated for next school year.

In general, defective materials had a differential effect on student achievement in the various HEP programs. The handwriting systems were most affected. The effect on evaluation data could be a lower level of achievement by students in experimental groups than would have occurred had the materials been defect free.

Question 6: When compared to preceding years, has HEP led to a redistribution of the use of the school day?

a) The first reponse indicates an increase in the amount of time devoted to language arts. When further queried on the topic, this was attributed to the addition of a two-hour HEP skills program and a forty-minute HEP literature program. The total time was greater than that heretofore spent on language arts.

b) The effect of this time increase devoted to language arts upon time devoted to other curriculum areas varied from room to room. In general, there was an approximately equal reduction in time devoted to all other primary grade activities. Several teachers indicated that there was no reduction in student achievement in the other areas, because time was used more efficiently in them, and because instruction in some areas (e.g., music, science, social studies) was included in the HEP materials. However, not all interviewees believed this to be the case.

It would be advisable to institute a modified longitudinal study to ascertain the cross curriculum area effects of the HEP materials.

Question 7: What adaptations, if any, do you know of being made in the recommended HEP procedures or in the HEP materials?

a) The adaptations reported were almost totally in the area of procedures. These seemed to stem from two sources: (1) adaptation to fit an ongoing school system, and (2) to compensate for late delivery and defective materials (as indicated previously).

b) The adaptations to fit an ongoing school system centered around the time block, and while most classes used the materials for the total time indicated, the use may have been interrupted by recess or lunch, or even by instruction in another curriculum area. Variations in the physical plants of the schools contributed in large measure to this variation. It should be noted that there were more than several comments that the division of time with HEP materials was not damaging and in fact enhanced the effectiveness of HEP materials.

c) The adaptation for late delivery centered around the use of available materials to fill in until HEP materials were delivered. More than several interviewees requested that should late delivery again be a problem, the Department or HEP planners should advise procedures and materials that would be most compatible and effective during the waiting period.

d) Another area reported as embodying deviations or adaptations was the use of temporary small group instruction. This centered around (1) instruction in procedures and techniques for use of equipment, (2) instruction or teacher tutoring simultaneously several students who were having problems mastering or completing a single task with the HEP material. Teachers felt that this temporary grouping (temporary was emphasized by all) was desirable and made a positive contribution to the effectiveness of the HEP materials.

e) Mentioned most often as needing to be included in HEP were: some form of phonics, readiness activities for immature children, and entry into manuscript before cursive. It should be noted, however, that other teachers have recognized that some phonics is built into the reading subprogram, that immature children can be easily cared for within HEP, and that entry into cursive script without manuscript is not a problem for children.

In summary, adaptations in the HEP materials and procedures appear to be an effect that will be adequately controlled by use of the "systems adherence reports" when interpreting the evaluation data.

Question 8: What recommendations would you make for further development and/or installation of HEP?

a) Several recommendations are implicit in the discussion of the preceding questions. Only those not covered elsewhere are presented here.

b) More professional judgment should be allowed in use of the HEP materials. Discussion of this recommendation appeared to indicate that teachers were reacting to the perceived rigidity of the instruction "not to deviate." Additional discussion indicated a general feeling that during the first year of using HEP materials only "minor" adaptations should be made. This appeared to be based on the rationales that unfamiliar materials ought not to be manipulated and adapted, and that teachers really didn't know the HEP system until they had used it one year. There also appeared a general feeling that "major" deviations should not be made in subsequent years unless approved by someone, either at the school, the district, or the DOE level. However, some interviewees were concerned by the HEP program's constraint on professional judgment. Some opposed these constraints on general principles (believed to be related to academic freedom) and some criticized specific points they felt were weak in the system. These specific points follow.

c) There was an almost universal recommendation that additional materials and options be available for the lower ability, less mature student. Activities that assisted in developing small muscle and hand-eye coordination were mentioned often. Materials that help to develop left to right progression was suggested. Materials that made explicit the phonics approach implicit in the HEP materials were suggested. Materials or suggestions that assisted students in developing readiness for self-direction were recommended.

d) In terms of high ability, more mature students, it was recommended that additions to the instructional library be made. These additions to have the characteristic of carrying a higher vocabulary content about topics consistent with the student's experience and conceptual background.

e) In terms of the HEP system itself, some interviewees requested that appropriate points in the system for the exercise of professional judgment should be identified. This was accompanied by a request for recommendations about the scope of the professional decision area at the identified point. One illustration of this recommendation was a request to identify particular sequences in the use of HEP options and alternatives that would be of value to students having varying kinds of problems in experiencing success with HEP skills material.

f) There was a recommendation and almost a request for an inservice training program that would familiarize administrators with the rationale, theoretical basis and operation of HEP materials.

g) There was a recommendation that substitute teachers be made familiar with HEP, either through inclusion in the HEP inservice for teachers or through a special substitute teacher workshop.

h) It was recommended that some explanation of HEP be prepared for school librarians and secretaries so that they could assist more effectively with HEP installation.

i) It was a common recommendation that the forms on which adaptations of HEP are to be requested or reported be made simpler.

j) It was recommended that an overall presentation be developed that indicates the full scope of the total HEP skill materials to be prepared and evaluated. The basis of this request seemed to relate to concern that as professional teachers involved with the total child, teachers need to know that experiences will be available to students so they can assist the student to guide his own learning. It was further recommended that this presentation explicitly indicate the implied integration of the apparently discrete HEP programs. In addition, point of cross-HEP skill programs reinforcement and cross-HEP program support should be identified.

k) There is a need for the DOE to reassess the teacher evaluation form for teachers in HEP. Some administrators have indicated that the form is inappropriate because of the nature of the HEP program.

l) There is a need to define and clarify the role and relationship of the Installation teacher, school administrator, District Coordinator, and classroom teacher. There appeared to be some inconsistencies and confusion on how Installation teachers were utilized at different schools and in different districts. In addition, the administrator-Installation teacher-classroom teacher relationship is not clearly defined (some teachers confronted Installation teachers with administrative problems and concerns).

m) Further study should be made of the Learning Center concept, as practiced by some schools. In addition, the currently practiced Learning Center at Waiakea Elementary School should be continued and studied further.

n) Further workshops for classroom teachers should include the following:

    (1) Organizational/management techniques, particularly for 3-on-2 teams.

    (2) Sharing of common concerns (e.g. "rap" sessions) among teachers from different schools/districts during school hours.

    (3) Options for attending either the summer or school-year workshop.

    (4) Identifying symptoms for children with physical defects.

o) Schools/districts should consider the practice of hiring substitute teachers for self-contained HEP classrooms but assigning them to 3-on-2 teams and then using one of the 3-on-2 team members for the self-contained classroom. This practice had been used in some schools and appeared to be functioning adequately.

p) Some considerations should be given to conducting workshops for substitute teachers and then hiring only these trained substitutes for HEP classrooms.

q) In-service training should be an on-going affair, held periodically throughout the year, particularly for teachers new to the program.

r) All districts/schools should participate in the practice of enrolling transferred children who were previously in HEP to be enrolled in an HEP classroom in the new school. This practice should be taken into consideration when assigning children into the various classrooms.

s) Teachers should continue the practice of listing the entry and exit dates for the various subprograms in the Teacher's Record folders. The practice has been helpful to teachers, Installation teachers, and diagnostic team members in determining whether children are having difficulties (e.g. reach a plateau) in certain areas.

t) Consideration should be given to include support or auxiliary personnel (e.g. counselors, diagnostic team members, etc.) in the teacher and/or administrator workshops.

u) Some consideration should be given to provide Installation teachers with a differential because of the demands of her job, or up-grade the Installation teacher position.

v) The DOE should seriously consider the establishment of a repair/maintenance center because of the growing number of materials/equipment being installed in schools and the relatively poor service provided by vendors for repair and maintenance.

w) Evaluation efforts should be continued in assessing the various by-products from HEP (e.g. effect on non-English-speaking children, use of HEP materials for older, low ability pupils, etc.).

x) Consideration should be given to eliminating or reducing the clerical-administrative tasks presently being done by the Installation teacher. Some districts resolved part of the problem by delegating the responsibilities of inventorying of the HEP materials and equipment to the school.

These types of recommendations seemed to indicate teacher approval and a positive professional attitude toward HEP. It was the opinion of the observers that these recommendations constitute a real concern to improve an already desirable and worthwhile program.

Question 9: Are HEP materials most effectively used by 3 on 2 teams or self-contained classroom teachers?

This question was very difficult for the interviewees on the grounds that by and large they had not experienced the use of HEP materials with both the three on two teams and the self-contained organization, but rather teachers experience one or the other of the organization forms. A summarization of the discussion about this question indicates that the materials can be effectively used in either of the organizational patterns. General consensus was recched, however, that the 3 on 2 teams were in more desperate need of the individualized materials that HEP presented in order to implement effectively that organizational pattern. As cited earlier in the report this material having been developed for them provided models for individualization in other topic areas and eased the materials preparation load on the team.

Question 10: In your judgment, are the HEP materials effective with high ability children? Low ability children?

All respondents to this question had a difficult time in making a decision. The general consensus was that there was something for everyone in HEP. The high ability students seemed to profit from being able to proceed at their own pace and not be held back by the tendency of a group to regress to the mean. The low ability chilren profited most from having a more positive development of their self-concept and being allowed to experience success at a pace consistent with their ability.

When the discussion was pushed further and hard choices were required of the respondents to the interviews, the high ability group was most commonly cited as receiving greatest benefit. It was pointed out several times that the HEP materials worked effectively with students who were classified as educationally-mentally retarted.

Students who are non-English speaking profited from HEP. There is apparently a very complimentary relationship between the HEP materials and the ability of students to adopt English as a medium in which to accomplish school-based learning tasks. This relationship is facilitated by the nature of the individualized materials and the self-pacing operation with options to pursue whatever alternatives seem to contribute most to the satisfaction of the particular needs of that particular child.

Several interviewees reported that some students from the upper grades (grades such as 4, 5 and 6) were being used as tutors with the HEP materials. This upper grade tutoring seemed to have two effects on the upper grade students: (1) It enhanced their prestige and interest in school by having been accorded the status of "teacher." In some cases the upper grade tutors were reported as behavioral problems in their home classrooms. With these students it was reported that these behavioral problems diminished concurrently with the time of involvement as tutors in HEP. (2) Upper grade students engaged in the tutoring improved their own reading and language skills as a result of their own involvement with the HEP materials.

In summary, the covariate control operation designed as a basis of the analysis with the pre-post data would utilize a measure of ability as a covariant. This would allow a determination of the relative effectiveness of the materials with students of different classes of ability. It would seem worthwhile, in addition, to further study the use of the materials in a remedial sense, it having been, incidentally, successful in the ameliorating of some problems of upper-grade students.

Question 11: Has your attitude toward HEP materials and procedures changed during this year? If so, how?

The interviewees generally responded by indicating that following the pre-school workshop training sessions they were quite enthusiastic and were looking forward with a great deal of anticipation to the use of the materials. As a result of the delays in delivery, however, they were somewhat frustrated. This frustration dissipated quickly when the materials were delivered and generally a positive attitude was re-established about the HEP progrmm itself. This seemed to be true of all interviewees: teachers, principals, district coordinators and Installation teachers.

An interesting bit of evidence from the interviews came to light in this regard. Approximately only one out of every one hundred teachers using the materials for the first time this year indicated that she would not want to use them in subsequent years. This seems to be a relatively high degree of acceptability in the professional judgment of the teachers. Further, a number of incidents were reported in which teachers sought in every possible way to have their own children in the classes using HEP materials. In fact, this created problems in assigning students to classes where the HEP materials were not available throughout the school. Additionally, there was a general report that there was a great desire on the part of parents who were not teachers in having their children included in the program.

In summary, the answers to this question seemed to indicate that the positive attitude of teachers at the beginning of the year was reinforced by use of the materials. It should be noted, however, that teachers who were interviewed after using the materials for the second year indicated an even more positive attitude. This was attributed to familiarity and comfort with the material and the fact that they had students who had developed some experience in using the skills of self-direction.

Additional Comments and Observations

This section of this report deals with some observations and comments which were collected from the interviews not bearing directly on the questions.

1. Several teachers commented that perhaps the greatest single effect of the HEP materials and procedures was increasing the professional growth of teachers using the material. The people making this comment felt that this overall increase in professionalization on the part of the teaching staff made a positive contribution throughout the school itself.

2. The greatest single factor in determining success in the use of the HEP materials was the attitudes of the teacher or teachers using the materials. This teacher-attitude factor would argue for an increased emphasis and efficiency in the delivery of the inservice training program. Perhaps shifting it to a school-based rather than a district-based approach and having it continue throughout the year instead of just focusing at the beginning of the year would be advisable.

3. Regarding the teacher-attitude aspect, it was generally agreed that the greater the degree of student success, the higher was the positive attitude held by the teachers. The other factor that influenced teacher attitude was the opinion colleague teachers held about the material.

4. The concept of the Installation teacher as a basis for introducing major curriculum changes was universally approved. It was particularly recommended by all participants that should a future major curriculum change be made, the IT approach should be used. Any success the program realizes is, in the eyes of the interviews, primarily attributable to the IT's. There was almost complete universal praise for the work of the specific IT's assigned to this program. They were heartily welcomed by both principals and teachers, as well as district coordinators, and were seen as very effective in the work they had carried out.

5. There was an extended discussion in several interviews about the effect of the time of day in which HEP was taught. Temperature (weather) appeared to be a major factor governing how people felt. If the school was in a particularly warm area of the state, there was a general agreement that the afternoon time was not as effective as the morning time in using HEP materials. If the school was in an area where temperature was not a large factor, then there was no discernable differences reported in whether the materials were used either in the morning or the afternoon.

6. There was a continuing theme of concern throughout most of the interviews that manuscript handwriting should be given prior consideration before introducing cursive

handwriting styles. These arguments were based on both the muscular development of the students and the presence of a greater number of manuscript models than cursive models. It seems to be of great concern to many teachers.

7. Some contradictions were reported in terms of integration of HEP into the overall school program. For instance, HEP indicates that group work per se is not appropriate to the learning of language in the procedures and the protocols of the system. However, the 3 on 2 team advisors, in dealing with the same teachers, indicated that grouping for common problems was desirable. The HEP materials indicated that teachers and students ought to use materials in the system itself and not deviate from them. In some cases the diagnostic teams, when analyzing the needs of a particular child, recommended the use of phonics material. This suggestion placed the teachers in a position of conflict.

8. When queried about the degree to which HEP materials, procedures, and recording practices assisted teachers to better know each individual student, questions and discussion centered around the ability of the teachers to diagnose needs for remediation or for referral to other resources in the school system. Many of the respondents indicated that teachers using HEP made fewer errors of referring students who should not have been referred and fewer errors of failing to refer students who should be referred. In the eyes of those citing these events, this situation was seen to be a by-product of the individualization aspect that allowed teachers to know each student more intimately in terms of his particular problems and resources.

9. A number of principals, teachers and IT's reported that there was more classroom visitation on the part of principals to the classrooms using HEP materials. Although not identified as such by the interviewees, this may be an experimental effect and would not continue in the future. However, it was reported in a number of cases. In the eyes of this observer this is a positive result.

10. There is almost universal approval of the way in which HEP materials were produced. The idea of concentrating state funds on a major curriculum area as opposed to distributing them throughout the districts and schools was generally approved. Several of the interviewees indicated that this was a change in their opinion and the change was based on the fact that the HEP materials and procedures were so apparently successful with the students.

11. In some cases there was a very grave concern that students would not retain mastery of a particular set of materials

over the period of a summer. There was no empirical evidence cited in this regard, but the situation could well be a subject for further study.

12. There was general concern expressed by most educators participating in interviews that unless some additional curriculum development continued into the future, students using the HEP skills material would eventually revert to traditional practices and much of the overall progress would be lost. A request seems to be implied here that curriculum development in the language arts area proceed as originally conceived in the HEP program proposal so that there will be a continuity of individualization, self-direction and motivation throughout the elementary years.

13. One of the almost universally reported phenomena was that as a result of kindergarteners using HEP materials, teachers had revised their opinions about the extent to which kindergarten age students are able to master subject content areas. This revision of opinion was tempered by a concern that too great a shift to subject matter areas in the kindergarten level would be in fact detrimental to the child. However, it argues that perhaps further revisions in the general content available to the kindergarten age range may be appropriate.

14. Parents seem to have taken more interest in school since HEP. Some schools reported almost a 100% parent-teacher conference rate. Additionally, parents have been volunteering more to work in the classroom--possibly because the HEP program provides for more involvement (e.g. tutoring). This phenomena, however, may be attributed to the newness of the program.

15. Administrators generally felt that weak or poor teachers have a better chance to work toward improvement using HEP than without it.

16. One Field school reported that the CTMM results for 2nd graders have improved over the last two years. Previously the scores were skewed toward the lower end, whereas the results during the past two years were distributed more normally. Another school reported kindergarteners in HEP performed much better this year than previously on the Metropolitan Reading Readiness Test.

17. The concern for continuity is not a problem in HEP because of its individualized nature. Children returning from absences, long weekends, holidays, etc., continue without any serious problem.

18. Opinion is divided on whether the principal's role has changed due to the installation of HEP. Some feel there is no notable difference; others indicated there is. Comments from the field included:

(1) The recordkeeping system has helped some administrators in their supervisory/administrative role.

  (a) Used as a substitute for lesson planning

  (b) Assists in parent conferences

  (c) Assists in discussion with teachers

  (d) Assists in getting a quick overview of progress in class

  (e) Provides more concrete information on children

(2) Principals felt they had a better relationship (rapport) with teachers and pupils.

  (a) Teachers accepted principals more on an equal level; more "open" in discussion---easier for evaluation

  (b) Principals enjoyed visiting classes and visited more often

  (c) Teachers felt more free to ask for assistance; more discussion between principal and teacher

  (d) The systematized approach in HEP has helped to define the teacher's role in the HEP classroom. Consequently, administrators have had an easier time in working with teachers (e.g. for evaluation purposes).

19) The greatest concern among the Installation teachers was in the area of human relationships--how best to relate to a teacher or administrator. This problem probably was the most demanding on the Installation Teachers. Some of the Installation teachers were forced to assume the role of an administrator by the school principals. They were given decision-making authority, were consulted in the evaluation of teachers, and were held responsible for inventorying of HEP materials.

20) The concept of the Remote Area Installation teacher did not appear to be functioning well because these Installation teachers were too involved with their own classroom teaching responsibilities. On the other hand, the Remote Area Installation teachers did commendably under the circumstances, particularly during the early weeks of the installation.

21) Administrators felt there is a need for more communication between the administrator and the Installation teacher. Classroom teachers were communicating with installation teachers without feedback to the administrators.

22) Installation teachers felt that generally they were spending too much time on clerical and administrative work (e.g. inventories, transporting materials to schools) and not enough time working with teachers and pupils.

23) Generally, teachers felt the one-a-week support services provided by the Installation teachers had been adequate.

24) It was generally felt by administrators, Installation teachers, and classroom teachers that the role of the classroom teacher has changed because of the HEP installation. Comments included:

    (a) Teachers appeared to be more relaxed in the HEP classroom; teachers had less anxieties in HEP than previously when principals visited the classroom.

    (b) Teachers, especially those in self-contained classes, developed a great need not to be absent from school.

    (c) Kindergarten teachers indicated that through HEP they had changed in their role from being a teacher of readiness activities exclusively to a new role as manager of learning. In addition, they felt they were more "academic" in their outlook toward teaching the kindergarten pupils.

25) Generally, teachers who did not attend the HEP workshop had the most difficulty in the program and had the most doubts or differences in philosophy with HEP.

26) Installation teachers were generally held responsible for orienting substitutes to HEP.

27) Some schools developed a modified learning center approach in using and sharing HEP materials. These experimental practices appeared to be working well and may provide the basis for future sharing patterns.

28) Although many of the administrators and teachers felt that the grades K-3 combination was compatible to the HEP format, the concern is in being able to provide a schedule and curriculum for the other subject areas.

29) Because of the need for teachers to be trained for HEP and the teaming effects of the 3-on-2 classroom organization, administrators felt that there needs to be more definite guidelines (e.g. maximum/minimum number of 3-on-2 teams for the forthcoming year, May/June deadline for notification to schools on the allocation for 3-on-2 teams and HEP packages) established for implementing the HEP program.

30) Concern was also expressed about the lack of repair/maintenance services provided by vendors, particularly on the neighbor islands.

31) Some self-contained teachers suggested that a ceiling on the number of children assigned to a self-contained class be set. A large number of children in a self-contained class makes it difficult for the teacher to help pupils because of the individualized approach in HEP.

32) Several teachers indicated that they were also individualizing the recess and nap time for the children. That is, children could go to recess and take naps whenever they wanted to. There appeared to be no indications of abuse on the part of pupils.

This concludes Section 2 of the report on those comments that could not easily be classified in one of the previously mentioned discussion questions. It should be borne in mind that these comments and observations are reported as given to the interviewers and, unless specifically stated otherwise, the interviewer cannot attest to the accuracy or validity of the comments except as to the fact that they were reported in the discussion.

c. Student Interviews

Another means to assess the impact of the Hawaii English Program on students was to interview a subsample of HEP children. Interviews were scheduled for 208 grades K-3 pupils from Field, Pilot, and Installation schools in May and June, 1971. Four students from each sample HEP classroom were randomly selected for the interviews. Overall 85.5% of the selected students responded for the interviews. Appendix 16 reports the rate of response by type of school and grade level.

A further breakdown of the data shows that overall the number of boys and girls responding for the interviews was about equal. About fifty-four percent of the total were boys and forty-six percent were girls.

The interview form contained thirteen items, asking students for their opinions and attitudes about various segments of the Hawaii English Program. Data relating to the first nine items are shown in Appendix 17.

The data reveal that both boys and girls in all grade levels (K-3) overwhelmingly liked the new English Program. Over 94% of the sample subjects indicated they were in favor of the program, while less than 5% said they were not. Two pupils gave no response to the item. These findings, together with the results from the parent interviews, clearly indicate that both pupils and parents were highly in favor of the Hawaii English Program.

In the area of peer-tutoring, 148 or 83.7% of all students surveyed indicated they had some experience in tutoring. This finding is particularly noteworthy in that 91% of the total number of students interviewed were first-year students in the new program.

Furthermore, 77.5% of these students stated that they enjoyed tutoring their classmates while only 3.3% indicated otherwise. The majority of students in the latter subgroup were, understandably, kindergarteners. These results support the contentions made by parents in the parent interviews that peer-tutoring was an important part of learning and that their children enjoyed the peer-relationships that are inherent in the tutoring system.

A great majority of both boys and girls were also tutored by others, as indicated through the interviews. Over 84% of all sample subjects were tutored at one time or another during the school year. Only 13.4% stated that they were not tutored at all and three pupils gave no response to the question. The majority of students who were not tutored came primarily from the kindergarten group. A related question revealed that 80.3% of the students indicated they enjoyed being tutored by their friends. About four percent of the respondents indicated they did not like to be tutored, while over 15% did not respond to the question. These findings again support the observations made by parents that their children enjoyed being tutored by others.

One of the indicators that a child is enjoying (or not enjoying) school is to talk about the learning activities with his parents. The study revealed that over 76% of all children surveyed discussed the new English program at home. Only 20.7% of the children indicated they did not talk about HEP at home, while four pupils gave no response.

In a related question, close to 94% of all children stated they thought the new English program was fun, while only ten of the 178 pupils surveyed indicated otherwise. One child did not respond to the question.

Finally, in two related questions, respondents were asked whether they felt they had learned a lot in the new language program, and whether they felt they had learned more than their friends. Over 93% of all children felt they had learned a lot in the HEP program and over 71% felt they had learned more than their friends. Only 4.4% of the respondents felt they had not learned a lot. On the other hand, about one fourth of the students indicated they had not learned more than their friends.

The findings from this portion of the interviews suggest that children in all four grade levels (K-3) who are in the new English program find school work enjoyable and fun. At the same time, the new program seems to be developing a positive self-concept among children which tends to facilitate both peer/peer and child/adult relationships.

In four open-ended and related questions, respondents were asked to state the aspects of the new program they liked best and liked least, and to indicate parts of the program they found to be the easiest and the hardest. Appendix 18-21 report the data by grade level, sex, and type of school.

The data in Appendix 18 show that over two-thirds of the respondents liked typing, the card stacks, reading, and writing the best among the many options offered in the HEP program. Over one-fourth of the interviewees listed typing most often. Pupil preferences between sexes and across grade levels were about the same.

When the foregoing data were compared with the findings in Appendix 19, however, three of the best liked options were listed in the top four categories of activities liked least. Listed most often as liked least were the following: "none", writing, stacks, and typing. The proportionately high frequency in the "none" category (about one-fourth of all respondents) suggests that the pupils are accepting and functioning adequately in the new program.

Interestingly, the data in Appendices 20 and 21 also reveal that the four most liked and disliked activities are also listed by children as being the easiest and hardest to do. The data in the foregoing tables, therefore, suggest that one of the goals of the new English program--that of providing youngsters with learning options--is being fully implemented. Furthermore, the lack of major differences overall in preferences between boys and girls appear to dispell the notion that there are learner differences between the sexes.

In the two final questions, respondents were asked to indicate their preferences for working in the classroom (with the teacher, with their friends, or by themselves), and whether they selected their own learning activities or were guided into subprograms by the teacher. Table 52 and 53 report the data.

Data shown in Table 52 reveal that overall pupils preferred to work in the language program with their peers. Over one-third of the responsents indicated they preferred working with their friends. Pupils were evenly divided in their preferences in working with the teacher and by themselves. Between sexes, the boys preferred working with their friends, by themselves, and with the teachers respectively, whereas among the girls the order was with the teacher, with friends, and by themselves respectively. Across grade levels and school types, the results were generally the same with the overall findings. The data in Table 52 also show that boys tend to be more independent than the girls within the HEP program, although the indicated preferences does not necessarily mean that the practices held true in the actual classroom situations.

The findings in Table 53 show that over two-thirds of the children were given the opportunity to select their own learning activities. About one-fourth of the respondents indicated that the classroom teacher guided them into subprograms, while approximately 6% stated that both teacher and student were involved in the decision-making processes. The foregoing findings indicate that the overall planning/decision-making system in the HEP program is being implemented as planned. Furthermore, students overall are being given the opportunity to become responsible for their own learning. At the same time, students who are not quite ready for making individual

Table 52. Pupil Preferences for Learning in the Hawaii English Program

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-total	Grade K			Grade 1			Grade 2		Grade 3		Sub-total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Work With the Teacher	10	1		4	2	1	2	1			21	16	1	1	6	3	1		1		3	32	53
Work With Their Friends	22	1	1	8	2	1	1	1	1		38	13	2		5	4	1	1	2	1		29	67
Work By Themselves	16	3	1	10	2	2	1				35	8	1	3	3	2					1	18	53
All Three												1										1	1
No Response	1			1							2				2							2	4

Table 53. Activity Selection Practices in the Hawaii English Program

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-total	Grade K			Grade 1			Grade 2		Grade 3		Sub-total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Student Selects	31	5	2	11	5	2	3	1	1		61	26	3	3	10	8	2	1	2	1	2	58	119
Teacher Selects	15			8	1	2		1			27	10	1	1	5	1			1			19	46
Both	2			3			1				6	2			1						2	5	11
No Response	1			1							2												2

decisions are being guided by classroom teachers into learning activities until such time when they become more capable of making their own decisions.

The data further suggest that there is a high degree of self-directed activity going on within the HEP classroom. The notions that kindergarteners and first graders are incapable of functioning without adequate teacher supervision, and similarly that classroom teachers tend to be overly supportive of primary-age children seem to be dispelled by the protocols inherent in the HEP system.

Finally, the unexpected high mortality rate and small sample sizes among Pilot and Field school second and third graders for the interviews made it extremely difficult to interpret the results for long-range attitudinal patterns. The second and third graders who have been in the HEP program longer (at least two years) would have provided more information through their experiences with the new program. Nevertheless, the data obtained primarily from first-year HEP subjects seem to indicate that pupils are not only accepting and functioning adequately in the new English program but enjoying the learning experiences as well.

d. Parent Interviews

The school public oftentimes play an important role in the development of new educational programs for our youngsters. The opinions and attitudes expressed by the lay public not only help to provide feedback for program modifications and adjustments but also indicate the general acceptance of innovative practices conducted by the school.

The introduction of the Hawaii English Language Skills subprogram in kindergarten and first grade classrooms throughout the State undoubtedly had an impact on parents of children involved in the program. To assess the extent of this impact, 208 parents of children randomly selected from the sample classrooms were interviewed by data collectors in May and June 1971. Of this total, 118 or 56.7% responded for the interviews. Table 54 reports the respondent rate for the interviews.

Table 54. District/State Rate of Response For Interviews

District*	Number Selected	Number Responding	% of Response
Honolulu	52	35	67.3
Central	32	21	65.6
Leeward	24	8	33.3
Windward	28	15	53.5
Hawaii	16	5	31.2
Maui	32	19	59.3
Kauai	24	15	62.5
Totals	208	118	56.7

*All districts except Hawaii includes parents from Field and Pilot Schools.

The Language Skills subprogram is apparently getting wide exposure through the school, PTA, and news media, as indicated by the responses by parents. Eighty-one percent of the parents interviewed indicated that they had heard of the new program. The greatest source of information was the school--through orientation meetings, parent/teacher conferences, notices, open houses, and HEP brochures. A large number of parents also indicated that they had heard of the program from several sources. Listed in Table 55 are the various sources listed by parents.

Table 55. Sources of Information About the Hawaii English Program

Source	Number of Times Listed
School (orientation meetings, conferences, notices, open houses, HEP brochures)	35
Several sources (newspaper, child, teachers, Installation teachers, school notices, special meetings, PTA, friends, professional dialogue, TV)	29
Teachers (Installation teachers, teachers in the program and others)	11
Own child	9
PTA	6
Friends	3
University	2
Newspaper	1

When asked whether they would like to know more about the program, however, the parents responded overwhelmingly in the affirmative. Ninety-seven or 82% of the parents wanted more information about HEP, while 13% indicated they did not and 4% gave no response to the item. In a related question, the respondents were asked to list specific aspects of the program they would like to know more about. Table 56 reports the responses given.

Table 56. Aspects of the Hawaii English Program Parents Would Like to Know More About

Areas Listed		Number of Times Listed
All phases of the program		23
Future plans (will HEP be continued, will HEP be expanded to other grades, will HEP techniques and procedures be expanded to other subject areas, will my child continue in the program next year)		15
More general information		14
Program processes and procedures (how it is taught, sequential development, teaching methods, goals of the program, how children learn)		13
Specific aspects of the program:		7
reading	2	
teaching the disruptive/slow child	1	
English	1	
vocabulary and parts of speech	1	
peer-tutoring	1	
amount of time used for program	1	
Evaluation results, including progress made and studies on HEP vs. non-HEP pupils		6
No response		19

The results shown in Table 56 indicate that parents generally are interested in finding out more about the HEP program. Of particular note are the concerns expressed about the future of the program, and about specific program methodology. Apparently parents have heard of the program but are unfamiliar about the inherent learning aspects within the Hawaii English Program and Department of Education proposals for continuing the program because of its unique features and designs.

The above findings are understandable when it was learned that only 58% of the parents interviewed had visited the classrooms one or more times. A further breakdown of this aspect of the interview revealed that only 22% of the parents had visited the classroom at least once (through open houses, conferencing, etc.), 19% two times, and 17% three or more times.

In four related questions, parents were asked to indicate whether they felt the English program and/or certain features of the program were considered as being good for their child or the educational system. The responses are shown on the following page in Table 57.

Table 57. Opinions About the Hawaii English Program

Interview Item	Yes	No	Don't Know (Undecided)	No Response
In general, is HEP a good program for your child?	106	7	4	1
Do you think it is a good idea to start teaching reading, listening, speaking, handwriting, and typing to kindergarten children?	111	7		
Is peer-tutoring a good system?	103	10	1	4
Does your child enjoy being tutored by other students?	88	13	7	10

The data above clearly shows that the parents who were interviewed had very favorable feelings about the HEP program. Ninety percent of them thought the Hawaii English Program was a good program, and 94% felt that the introduction of the various academic strands to kindergarteners was a good idea.

Although not as favorable, the parents also opined that the peer-tutoring system inherent in the English Program was a good technique for use with the youngsters. Over 87% favored the peer-tutoring system. When asked whether their children enjoyed being tutored, however, 11% of the parents indicated that their children did not.

Asked to indicate specific components/ modes within the program their children liked best and disliked most, the parents responded as follows (Table 58):

Table 58. Parent Opinions of Child's Likes and Dislikes of Components/Modes Within the Hawaii English Program

Components/Modes		Likes	Dislikes
More than one:		23	
Reading and writing	6		
Reading and card stacks	3		
Reading and Tapes	1		
Reading and Tutoring	1		
Typing and card stacks	2		
Typing and LM	1		
Typing and tapes	1		
Typing and handwriting	1		
Typing and listening	1		
Typing and music	1		
Reading, typing and card stacks	2		
Reading, typing and handwriting	1		
Typing, handwriting, and card stacks	1		
Typing, card stacks, and tapes	1		
Card stacks and writing			1
Typing		20	8
Reading		15	
Card stacks		9	7
All aspects		9	
Handwriting		5	4
Tutoring		3	2
Language Master books and cards		2	1
Vocabulary		1	
Speaking		1	
Listening			1
Freedom in the classroom		1	
Non-HEP activities listed		5	2
None		1	47
Don't know		17	28
No response		6	17

The data in Table 58 reveal that about one-fourth of the parents responding to the interviews indicated that their children liked reading the best, followed by typing, the card stacks, and handwriting. By the same token, over one-fourth of the parents also indicated that their children liked all or more than one aspect of the new English Program, while about 40% indicated that none of the activities within the new English Program was particularly disliked.

It is also interesting to note that none of the respondents indicated that their children disliked reading the most--an indication, perhaps, that the Hawaii English Program is cultivating an interest in and love for reading activities among elementary school children.

The final item on the interview form was left optional, inviting parents to add comments about the program. Mentioned most often were statements praising the new English Program and comments relating to concerns about program expansion. Parents indicated that they were pleased with the program and with the progress made by their children in school. In addition, the respondents noted that their children were enjoying school more and becoming more aware of things around them and outside of the classroom/school (e.g. reading more, concern for people, etc.).

One interesting comment was noted by one parent who had twin children. One child was in the HEP program while the other was not. The parent stated that both children were progressing at about the same rate. However, the parent added, the child in the non-HEP classroom was always on the brighter side.

Other comments are noted in Table 59.

Table 59. Additional Comments By Parents About the Hawaii English Program

Comments		Number of Times Listed
HEP is a good program (child likes and enjoys going to school, child progressing well, more awareness, motivated towards learning)		13
Program expansion:		13
Will program be continued	6	
Need more materials/equipment	3	
Will program be expanded to other grade levels	2	
Should include foreign languages	1	
Priority for funding should be on inclusion of more children rather than equipment/materials	1	
Public relations (need for more program orientation, need to know more about child's progress)		4
Concern for too much pupil freedom (children not tutoring properly, need for more control of pupil freedom)		3
Concern for child if she has to return to traditional classroom setting in upper grade levels		2
How were books for the program selected		1
Non-English speaking child has a difficult time understanding the teacher		1
Program is interesting		1
Cursive writing is confusing to child		1
Twin children: one in HEP, other in non-HEP classroom; both progressing at same rate; non-HEP child was always brighter		1

The data from this investigation clearly indicate that parents of children in the Hawaii English Program who were interviewed are highly in favor of the new curriculum design. Their comments and responses reveal that basic elements of the Language Skills subprogram (e.g. peer-tutoring) are generally accepted by the respondents. Furthermore, parents indicated that their children also appear to be accepting and enjoying the learning activities conducted in the program, and seem more motivated toward school attendance.

The study also revealed that although schools are attempting to keep parents informed about these newer curricular developments, there is a need to go into greater depth in orienting the school public about these new programs. Long-range proposals and specific program processes and procedures were of particular concern among parents who were interviewed.

e. Visitor Questionnaire

Since the inception of the Hawaii English Project, visitors from the community and the mainland have been treking to our schools to watch HEP in action. Kalihi-Uka Elementary School alone, out of the five schools that field-tested the HEP four years ago, hosted over 750 visitors during the 1969-70 school year.

This past school year, the HEP program was installed statewide--in at least one classroom in every school throughout the State. During the first half of the school year, visitors were directed primarily to the Field and Pilot schools because all materials and equipment had not been delivered to Installation schools until December-January and school personnel needed time to adjust to the new program.

To assess the impact of the new program, classroom visitors were asked to complete a visitor's questionnaire. It should be pointed out, however, that although visitors to HEP classrooms were asked to complete the questionnaire, not all of them did so. For instance, during the period ending December 18, 1970, over 194 visitors were reported to have visited HEP classrooms. However, only a total of 64 elected to complete the questionnaire.

The summary reported below is a compilation of reactions by 201 visitors visiting HEP classrooms during the 1970-71 school year. The majority of the visitors who completed the questionnaire were classroom teachers in the HEP program or were planning to teach HEP the following school year, university students from the Manoa and Hilo campuses of the University, and parents. Table 60 below reports the breakdown on the type of people visiting the classrooms.

Table 60. Classification of
Visitors to HEP Classroom During the 1970-71 School Year

Classification	Number
Classroom teachers (including mainland teachers)	67
Students (including UH Manoa and Hilo campuses, and the mainland)	57
Parents	46
School administrators, AIPs	5
Government officials, administrators (including Thailanese)	4
School Counselors, librarians, substitute teachers	3
Installation teachers, supervising teachers	2
Instructional designer; other educators	2
HSTA Field Representative	1
Others	12
No Response	2

The Installation schools in the local communities were visited the most, although the other two types of schools (Field and Pilot) had many visitors also. All of the visitors listed under Field schools were at Kalihi-Uka, as no completed questionnaires were submitted by the four Molokai Field schools. The breakdown by type of schools and districts are shown in Table 61.

Table 61. Type of School and Districts Visited, 1970-71

Type of School/District	Number of Visitors	
Field (all at Kalihi-Uka in Honolulu)		59
Pilot:		42
Waiakea (Hawaii)	18	
Shafter (Central)	9	
Puohala (Windward)	8	
Makaha (Leeward)	7	
Installation:		93
Leeward District	22	
Honolulu District	19	
Kauai District	14	
Central District	11	
Hawaii District	12	
Maui District	12	
Windward District	3	
No indication		7
Total		201

When completing the questionnaires, the visitors were asked to indicate the schools or school system they were associated with. The largest group was associated with the local public school system (DOE). Additionally, however, educators from as far away as Thailand, Canada, and New York were also among the visiting groups. Comments on the questionnaires indicated they had heard of the HEP program and were interested in obtaining more information. Table 62 lists the schools/school systems the 201 visitors were associated with.

Table 62. List of Schools/School Systems Associated With By Visitors

Schools/School Systems	Number
Local public school system (DOE)	73
University (includes Manoa and Hilo campuses)	52
Out-of-State (includes public elementary and university levels)	8
Thailand school system/Thailand government	4
Local private schools	2
No response (includes local community schools visited by parents)	62

Five questions were asked on the Visitor Questionnaire. The first related to the visitor's overall impression of the HEP program. The reactions were overwhelmingly favorable to the program. Since the responses were quite varied, they were grouped into categories. Of the many responses written, only six were definitely considered negative toward the program, while seven indicated both positive and negative reactions. Table 63 lists the responses made by the visitors.

Table 63. Overall Impression of the HEP Program

Categories	No. Responding
Good; excellent; fine; unique; challenging; wonderful; interesting; progressive; like it; good potential; well-planned; positive; successful; most favorable; very pleased; effective; very promising; ideal; impressed; impressive	102
Tremendous; fabulous; great; exciting; terrific; overwhelming; fascinating; fantastic; amazing	27
Good program in terms of individualization; variety of materials; self-direction	19
Well-designed; good insight; step in right direction; well-organized; systematic	12
Helpful to own child; glad child is in it	7
Big improvement over previous/other programs	5
Beneficial; fun; good involvement for pupils	5
The program for slow learners	1
Should expand to all grade levels	1
Meets child's interest	1
Acceptable objectives	1
Can't give a valid opinion yet	4
Discouraged; poorly planned	2
Goals impressive but time and experience will tell whether they are met	2
Some good in the program but others leave much to be desired; depend on type of children involved	2
Should include more phonics	2
Seems to work well but depend on teacher's competence and organization	1
Advantages outweigh the disadvantages	1
Not suited for the needs of our community	1
Learning effective but boring	1
Works better in the self-contained classroom	1
No response	11

The second question asked for the most desirable aspects of the Hawaii English Project. In the opinion of the visitors, the most desirable parts of the program related to the individualized approach to learning, the variety of instructional materials and equipment, and the self-direction of the pupils. Table 64 reports the findings on this topic.

Table 64. Most Desirable Aspects of the HEP Program

Comments		No. Responding
Individualization		106
Variety of materials/equipment; learning centers; programmed materials; learning environment		52
Self-direction; independent work		45
Enjoyment in learning by pupils; broadening the attention span of pupils		30
Peer-tutoring		24
Social development; progress and achievement of pupils; preparation for future		18
Teacher's role; student/teacher ratio		16
Sense of accomplishment noticed in pupils; self-esteem		11
Diagnostic/evaluation system		7
Organization; systematic; logical progression		5
Recordkeeping		3
All		3
Adaptability of program/materials		2
Fewer discipline problems; freedom for children		2
Subprograms:	Writing	4
	Stacks	4
	Reading	3
	Taped books	1
	Oral drills	1
	Typing	1
	LM	1
	Linguistics	1
	Speaking	1
Attempts to individualize (written in negative tone)		1
Removed from present teaching modes		1
No response		9

The reactions by visitors to the third question on the questionnaire, which related to the least desirable aspects of the program, were spread over a wide spectrum of opinions. Talbe 65 lists the visitors comments.

Table 65. Least Desirable Aspects of the HEP Program

Comments	Number Responding
Not enough supervision; large classes; too many children; need for more teachers and aides	15
Some children not able to handle independent work; children not self-directed	13
Need for more funds and legislative support	8
Incorrect tutoring; tutors bored	8
Recordkeeping; managerial role of teachers	8
No provisions for teacher creativity; lack of alternative programs; need for supplementary programs.	8
Lack of materials; starting without all materials; misuse of materials	7
Decoding not necessarily leading to comprehension; memorizing instead of decoding; not enough phonics	6
Materials not durable; delay in delivery/replacements	5
No coordination between state, district, and school levels	4
Hectic classroom atmosphere; getting started	4
Writing program; language and concept development; lack of concrete experiences	3
Not suitable for culturally deprived children	3
Not suitable for the deaf	2
Teaming effect of the 3-on-2 classroom organization	2
Time block	2
Not suited for "fast" children	1
Better suited for culturally deprived children	1
Not suited for grade K children	1
Diagnosing children properly; diagnostic approach is time consuming	1
Drills boring	1
Any evidence of success of the program?	1
Inconsistency in materials	1
Need for guidance program	1
Too much emphasis on cognitive learning	1
Lack of control by planners over final program	1
Self-contained HEP	1
None; couldn't see any; everything good	20
Unable to judge	6
No response	43

The fourth question asked visitors to list aspects of the program they would like to see expanded. Mentioned most often were comments relating to expansion to the upper grades and/or other subject areas. Table 66 lists these comments.

Table 66. Aspects of the Program That Should Be Expanded

Comments		Number Responding
To other grades (including high school level); other subject areas; non-English speaking; slow learners; mentally retarded; more classrooms		53
All aspects		25
Supplies; materials; equipment; material for home use		20
Individualization		13
Subprograms:	Writing; film loop mode	9
	Reading	9
	Typing	3
	Literature	2
	Stacks	2
	Language	1
	Speaking	1
	Skills	1
	Listening	1
	Records and songs	1
Unqualified teachers		5
Phonics; introduction to phonics		3
Learning process		2
Self-directedness		2
Tutoring system		2
Evaluation/diagnosis system		2
Schools in California, Thailand		2
Teacher training program		2
More teachers		2
Better survey in use of federal funds		1
Teachers role as a guide		1
Classroom organization		1
Teacher options		1
Comprehension activities		1
None		1
No response		60

Finally, visitors were asked to indicate the reasons for their visitations (influencing factor). Interestingly, many of the parent visitors indicated that their own child's enthusiasm and discussions about the program influenced them to visit classrooms. Table 67 lists the influencing factors for the visitation.

Table 67. Influencing Factors for the Visitation

Influencing Factors	No. Responding
University class project (includes Manoa and Hilo campuses)	44
Interested	44
Own child; child in class	36
School administrators	17
HEP participating teachers	14
Installation teachers, District HEP Coordinators	10
Presently teaching HEP	8
Parents meeting, open house	6
Part of AIP training program	3
Others	6
No response	13

The results of this survey on the reactions of visitors to the Hawaii English Project classrooms clearly indicate that they have been highly impressed with the program. In fact, the visitors completing the questionnaire have expressed a need for greater expansion of almost all aspects of the program and to other grade levels and subject areas as well.

The major concerns expressed by the visitors, on the other hand, appeared to be the need for additional assistance to classroom teachers to assist in the supervision. However, the responses were distributed over a wide range of opinions and included the need for additional support for continuation and expansion of the program by the educational decision-makers.

9. Program Support By Installation Teachers

a. Installation Teacher Log

For the 1970-71 installation of the Hawaii English Project, special support personnel were added to the seven school districts in the State to assist classroom teachers with the implementation of the new program. These Installation teachers (formerly called On-site Resource teachers) were full-time, off-ratio personnel assigned to the different districts who received special training to assist with the HEP installation.

The primary function of the Installation teachers was to perform a supervisory/resource-coordinator role, working out of the district office. Specific duties included: (1) providing direct assistance to classroom teachers assigned to her, (2) providing on-the-job training for teachers who did not attend the required workshops, (3) providing assistance to the district coordinator in the in-service training of teachers, (4) helping to introduce new components of the program, (5) providing assistance in the checking, inventorying, and distributing of HEP materials and equipment, (6) monitoring the evaluation of the program and relaying feedback to Project planners, (7) acting as the district liaison between school, State, and HEP, (8) interpreting HEP to others (faculty, parents, community), (9) keeping the school, district, State, and Project informed on the progress of the installation, and (10) participating in training activities for her own professional improvement.

Forty-three ITs were assigned to the Field, Pilot, and Installation schools on an approximate ratio of one-IT-per-six-classrooms. In addition, ten HEP classroom teachers were assigned as Remote Area Instllation teachers because there were instances of widely separated schools on the neighbor islands where it was impractical to assign a regular, full-time Installation teacher. These Remote Area ITs were selected from the HEP teaching team and were trained to function as the regular Installation teacher as well as teach in the HEP program.

To assess the functions and roles performed by the Installation teachers--in terms of workload and problems associated with the job performance, all ITs were asked to complete a log sheet during four different periods of the 1970-71 school year. The assessment periods were as follows:

Week of October 26-30
Week of November 16-20
Week of February 1-5
Week of April 19-23

The rate of return by the 43 Installation teachers and 10 Remote Area ITs during the four data collection periods is shown on Appendix 22.

The rate of return is somewhat distorted in that the log sheets were not distributed to the Maui and Hawaii District Remote Area ITs during the October data collection period. In addition, four of the Remote Area and two of the regular ITs did not submit the reports for any of the four reporting periods.

To assess the scope of their performance, the ITs were asked to estimate the percentage of time spent in eight categories of work associated with their role. A ninth item was left open-ended to permit ITs to indicate the other activities they were called upon to do. Appendix 23 presents the data related to this aspect of the log sheet.

A review of the data in Appendix 21 reveals that generally the ITs spent most of their time working with children (diagnosing, preparing pupils for tutoring, etc.) and in administration and paperwork (processing/deliverying of HEP materials, repair/maintenance of defective materials, etc.). Overall, only two notable differences are noted between the work of the regular and Remote Area IT. Remote Area ITs spent the bulk of their time in working with children and very little time in administration and paperwork. This was expected since the Remote Area IT was a member of the HEP teaching team.

The latter generalization supports the contention that the Remote Area IT had a more difficult time performing in her function as did the regular IT. The data in Appendix 20 on the rate of return further support the observation that Remote Area ITs had little time other than for teaching.

Undoubtedly the two categories requiring the greatest amount of time from the IT (administration and paperwork, and working with children) were the result of the delay in the delivery of materials (which were distributed piecemeal primarily in October and November), the need to prepare teachers and pupils for the new subprograms, and the requirements of receiving and installing the new Literature subprograms.

Another interesting aspect of the data in Appendix 21 is the time put into the "other" category by ITs. Mentioned most often in this category were traveling time, repair/maintenance of materials, meeting with interested school public (other teachers, parents, University students, and inventory of HEP materials).

The Installation teachers were also asked to list the activities they felt took too much of their time during each of the four data collection periods. The results of the responses made by ITs returning the log sheet support the earlier findings. Regular ITs felt that much of their time was being spent on administration and paperwork (including receiving, inventorying, and distributing HEP materials and equipment). Remote Area ITs, on the other hand, felt that they needed to spend more time on their IT chores rather than primarily on children.

Interestingly, the time spent on repair and maintenance was not listed as often as anticipated. This finding may be due, in part, to the timing of the data collection. That is, the two earlier reporting periods (October and November) may have been prior to the delivery of all materials and consequently many of the materials may not have broken down. Additionally, many of the defective materials may have been replaced or repaired by the February and April reporting deadlines.

Table 68 reports the data on this phase of the survey.

Table 68. List and Frequency of Activities Installation Teacher Spent Too Much Time On

Activities	Remote Area ITs				Regular ITs				Regular IT Totals
	Oct	Nov	Feb	Apr	Oct	Nov	Feb	Apr	
Administration and paperwork (includes processing/ distribution, inventorying of materials/ equipment, telephoning for repair and maintenance services, etc.)					30	25	9	14	168
Repair and maintenance of HEP materials/ equipment					11	10	8	5	34
Conferences and meetings with administrators, teachers, parents; workshops					8	5	6	4	23
Literature program (laminating cards, clarifying statements)					2		4		6
Tutoring; working with children	2		1	1		1			1
Language Systems								1	1
Classroom Observations								1	1
No response; none		1	3	4	5	11	5	21	42

When asked to list the activities they would have liked to spend more time on, ITs responded by listing most often: assisting teachers with planning new materials and working with children.

Table 69 lists the data on this phase of the evaluation.

Table 69. List and Frequency of Activities ITs Wanted to Spend More Time On

Activities	Remote Area ITs				Regular ITs				Regular IT Totals
	Oct	Nov	Feb	Apr	Oct	Nov	Feb	Apr	
Assisting teacher with planning/new materials					25	22	11	8	66
Working with children					20	17	10	13	60
Classroom observation	2			1	15	7	6	6	34
Working with new materials (study materials, etc.)					3	3	1	3	10
Administration and paperwork					6	2	1		9
Literature program					1	6	2		9
Conferences and meetings with Administrators/ITs					3	2			5
Language Systems program						1		1	2
Repair and production of materials					1				1
No response		1	2	3	2	5	6	15	28

The fourth question on the log sheet asked ITs to indicate areas or activities which would have made their work more efficient and effective. Table 70 reports the data relating to this item.

Table 70. List and Frequency of Area/Activities That Would Reduce IT Work Load

Activities	Remote Area ITs Oct	Nov	Feb	Apr	Regular ITs Oct	Nov	Feb	Apr	Regular IT Totals
Administration and paper work (less traveling, less paperwork, clerical assistance, typewriter, telephone, office supplies)					14	13	4	4	35
Logistics of delivery* (correct shipment, guide for processing/organization, list of items, complete RIAI forms, complete inventory forms, consistency in delivery, time table for delivery)			1		12	9	6	1	28
Repair/maintenance (more durable material/equipment, free from repair and maintenance responsibilities, repair kits, trained repairman on a regular basis, better repair services, replacement of defective/missing items)		1		1	8	6	5	3	22
Installation package (all materials, extra set, more sets*, manual for 3-on-2 teams and ITs)	2				12	4	2	3	21
Better communications (projections for next year at an earlier date, regular meetings of ITs to discuss common concerns, meetings with planners, better communications between HEP and schools, encouragement from HEP, evaluation data, more information on summer workshops, copies of memo to school administrators)					5	1	1	4	11
Better containers for Literature materials					5	4			9
School personnel (teachers trained in HEP, teachers favorable toward HEP, custodians to assist in delivery of Literature program, administrators who are cooperative and knowledgeable)			2	3	2	3	2		7
Public relations brochure					4				4
Job description					1	1			2
More days in the week					1				1
Fewer schools to support								1	1
Funds to transport HEP materials to distant remote areas				1					
No response					4	9	7	21	41

* Includes Literature program materials/equipment

The data in Table 70 generally reflect the problems encountered by ITs during the school year. That is, during the early months of the school year, ITs were saddled with delivery/processing responsibilities for the new program. In addition the defective materials cropping up in some classrooms required much of the ITs time in terms of repair work, phone calls for repair services, etc.

Finally, the last question on the log sheet asked whether ITs had attended the summer workshop. Of the 43 regular ITs, 33 indicated they had, 2 stated they did not, six were Field/Pilot Installation teachers who had attended workshops the previous year and/or only attended the final two weeks of the session, and two ITs did not submit any log sheet which would have provided the data.

Of the ten Remote Area ITs, six submitted the log sheets. Of these six, five attended the workshop while the sixth gave no response.

It should also be noted that there were two turnovers during the school year. One member went on maternity leave while the other went into the DOE's Administrative Intern Program during the second semester. Both replacements, as a consequence, were not trained as Installation teachers.

In conclusion, the ITs generally had functioned as originally intended during the 1970-71 school year. The unfortunate circumstances of the late delivery and defects of HEP materials created unanticipated problems that put an extra burden on the ITs.

10. Adherence to the HEP System

a. Systems Adherence Questionnaire by Installation Teacher

One of the techniques used to determine the effects of the HEP program was to ask Installation teachers to complete the Systems Adherence Questionnaire. The questionnaire, relating specifically to the Language Skills subprogram, asked 10 questions on the extent of deviations from the HEP philosophy and guidelines observed by Installation teachers in classrooms they supported. In addition, one item was open-ended requiring ITs to list major deviations that were not listed. Installation teachers, representing Field, Pilot, and Installation schools, were asked to submit their findings in June of the past school year.

Out of the total of 53 Installation teachers, including 10 Remote Area Installation teachers, 44 returned the questionnaires. Thirty-nine were from the regular ITs and five from the remote areas. The 44 Installation teachers supported a total of 265 classes: 160 3-on-2 and 105 self-contained classrooms. A total of 565 classroom teachers were in these 3-on-2 and self-contained classrooms. Table 71 lists the responses made by the Installation teachers in relation to the items on the Systems Adherence Questionnaire.

Table 71. Responses By Installation Teachers on the Systems Adherence Questionnaires

Item		No. of Responses
1. Number of classes supported during 1970-71	3-on 2:	160
	S.C.:	105
	Total:	265

	Number Deviating	%	No. Not Deviating	%	No Response
2. Number of classes with three or more students in manuscript writing	62	23.4	203	76.6	0
3. Number of classes using phonics as a supplement to HEP	41	15.5	224	84.5	1
4. Number of classes not conducting daily planning circles	15	5.6	250	94.4	0
5. Number of classes not conducting daily evaluation circles	20	7.5	245	92.5	0
6. Number of classes using group instruction for language arts as a supplement to HEP	29	10.9	236	89.1	0
7. Number of teachers assigning three or more pupils to programs on a regular basis	80	14.2	485	85.8	0
8. Number of teachers not permitting pupils to keep their own records	6	1.1	559	98.9	0
9. Number of classes not heterogenously grouped	26	9.8	239	90.2	0
10. Number of teachers spending most of their time in tutoring	121	21.4	444	78.6	0
11. Number of classes that did not violate any of the above	81	30.6	184*	69.4	0

Item number 12 of the Systems Adherence Questionnaire was open-ended and asked ITs to describe deviations not mentioned on the questionnaire that were observed in their classrooms. Because the range of responses was very wide, they were compiled and subgrouped into various categories. Table 72 lists the findings.

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* Of this total, 13 were identified as being Field and 23 as being Pilot classes.

Table 72. Other Deviations Observed in the Classrooms

Deviations		Number of Times Listed
Program Deviations:		14
Discontinuing manuscript for transferees	2	
SRA linguistic series workbook used	2	
Cut-out letters used	2	
Worksheets on initial consonants, matching letters, rhyming words dittoed	2	
Listening/Speaking not needed due to incomplete sets	1	
Supplementary art activity	1	
DMs and Es program modified (teacher pointed to pictures)	1	
Simpler dictionary and capitalization program devised	1	
RFU box used for reading	1	
Board work with groups on word patterns	1	
Time block (less than 2 hours; deviations due to recess duty; interruptions by recess periods; split into AM & PM periods		7
Written contracts with evaluation at end of week		3
Tutoring (no tutoring, self-tutoring, cues given to slow pupils)		3
Review/homework (card stack words printed for review purposes; homework assigned; no review)		3
Group (by ability, by age)		2
Program tags not put in folder immediately after exiting from program		2
Recording sheets made for typing, BRS, Spelling I		2
Planning circles (charts made for planning circle; longer period of time for planning)		2
Regrouping into three homogeneous math groups (2 in HEP and 1 in math, groups rotated going into math--two in HEP, one in math; 2 teachers in HEP, one in math)		1
Learning procedures altered		1
Two 3-on-2 classes combined (one full-time HEP, one 1/2 time HEP, one non-HEP)		1
Alternative to HEP learning goals		1

The degree to which HEP protocols were adhered to was difficult to assess because there was no agreement on what constituted a deviation. Adjustments to program installation were made early in the school year during the interim when delivery of materials was delayed. Additionally, the arrival of HEP materials necessitated further adjustments to be made because some of the materials were not in the sequence required for pupil use. Compounding the dilemma was some degree of material/equipment defects that required additional modifications from HEP protocols.

The specific areas listed in Table 71 may be considered as major deviations from the HEP program. However, the items listed in Table 72 would seem to indicate that some of the adjustments made by classroom teachers did not adversely affect the basic HEP format.

Taking these factors into consideration, the results of this investigation revealed that approximately one-third of the HEP classes surveyed deviated to some degree from the HEP protocols. The greatest amount of program modification seems to have occurred within the Handwriting subprogram (manuscript writing) and in the management area of tutoring. It should be noted, however,that entry into manuscript writing is an option in the HEP program. Entry is contingent upon first attempting to enter the child into cursive writing. The child enters manuscript only if she is unable to function in cursive. The nature of the item on the Systems Adherence Questionnaire did not make this distinction, thereby making it difficult to provide a more valid assessment in this area.

The findings on handwriting and phonics are particularly noteworthy. The general concensus of opinions expressed by school personnel through group interviews favored some program modifications in these two areas. The data from this survey supports the need felt by classroom teachers to make adjustments in these two areas.

It was also interesting to note that a high majority of classroom teachers were permitting youngsters to keep their own progress/achievement records. This finding adds support to one of the program goals--that self-direction is an inherent function of the HEP program. Teachers were apparently providing pupils with the opportunity to become self-directed.

The general conclusion reached from the data is that by and large classroom teachers were adhering to the HEP system. Program modifications that did occur were the result of circumstances unanticipated, and generally were temporary and/or to fit the particular needs of the classroom or school. It is speculated that the relatively stable implementation of the HEP program was directly related to the strong supporting role provided by the Installation teachers.

IV. THE LITERATURE SUBPROGRAM

IV. LITERATURE SUBPROGRAM

A. Program Variables

1. Assumptions

The program for General Education for the public schools of Hawaii justifies literature on the basis that through this study the student "comes to understand himself, his society, and the world around him."

The Hawaii English Literature subprogram reflects this rationale by assuming that literature is a way of knowing. What literature makes known comes from the world of human experience, rendered through a particular writer's imagination. The way to knowing literature, therefore, is the experiential encounter with the work, and since the reader's response to the work is a complex one involving cognitive, affective, perceptual, even psychomotor areas, students must be given many opportunities to experience the work as deeply as they can, and to experience the wide range of works in literature. In the elementary program this has been the primary concern; as students progress, other concerns will be added.

In order to further this humanistic concern, the Literature program emphasizes literature as process. That is, the program begins with the fact that literature, like all art, is a symbolic form. Symbolic form at a direct and literal level can be seen in the characters, plot, and setting of a story, which represent something which the writer wanted to say. At the broadest level, it is the total work, the sum of words which construct the particular world of the story or poem, the particular experience of love, nature, or terror which the words on the page represent. Growing naturally out of this concern for symbolic form is the importance which the program places on the work itself, rather than the acquiring of information or facts about literature from secondary sources. By saying that literature can best be approached as an art form, and by defining art as symbolic rendering, the program moves to a position which considers the expression, the understanding, and the appreciation of ideas, feelings and beliefs through the various arts to be as important for normal development as any other school study.

Understanding literature as a process involves being familiar with the special employment that writers make of language. What makes a poem, story, novel, or play is not the theme which can be abstracted from it, but the playful, inventive, free use of language. That means that students must be give the know-how to the understanding of literature. This involves being able to pick up patterns of contrast and repetition of various kinds, being able to grasp tone through connotation, developing a fund of allusion upon which to draw, and perceiving how parts relate for form a whole. It also means recognition that reading in the basic skills sense is only the primary step in reading literature.

2. Goals and Rationale

The overall goals of the literature program are (a) to establish literature as an essential part of the curriculum from K to 12, and (b) to teach it in ways which are faithful to the nature of both literature and children. A good literature program does not weaken, falsify, or sentimentalize literature; neither does it place primary stress, especially at the elementary level, on the imparting of abstract ideas. Rather, students are allowed at every level of the program to have direct experiences with literature which is at their level of understanding, within their power to grasp. The humanistic values of literature implied in the General Education recommendation are the reasons for including literature in the curriculum at all levels. They are best realized in the intense involvement with the work, the mixture of intellectual and emotional experience, the range of insight which literature makes possible, even the possible glimpse of a moral vision. Literature is a way of affirming our very nature, a mode of being human as distinct from being vegetable or mineral.

The expected outcomes for Literature Band I are:

a. Children like selections, are willing or eager to listen to or read them.

b. Children like activities, are willing or eager to participate in them.

c. Children can participate in large group, small group, and individual activities.

d. Children experience a greater number of stories and poems; are aware that good stories come from all over the world.

e. Children's modes of experession are developed by the activities:

   1) they learn to talk through puppets

   2) they are able to make up stories

   3) they are able to express their ideas and feelings through body movements

f. Children become more fluent:

   1) ideationally, because:

      a) they can make up stories

      b) they can create their own symbolic forms

2) verbally, because:

a) they can tell their own stories

b) they can talk about stories and poems they have heard or read

3) perceptually, because

a) they can interpret through form, color, and sound

b) they can create through form, color, and sound

g. Children develop listening skills.

h. Children develop the ability to establish relationships among stories, types, characters, and character traits in ways which are appropriate to the goals of the program.

3. Organization of the Curriculum

The literature curriculum at the elementary level is arranged in three bands roughly related to grade level. Band I is intended for grades K-2; Band II for grades 3-4; Band III for grades 5-6.

The major divisions of each band are called elements. The elements constitute a matrix in the sense that each one refers to an area of experience in every human being's life, and therefore has generated endless numbers of stories, poems, plays, and songs. Every child has experienced Make Believe, has observed the World Around Us, has shared the joys and griefs of Growing Up, has been disciplined by the Social Order, and has enjoyed Adventure.

Each element is subdivided into a number of components. The component gives direction to the choice of books and writing of lesson materials, because it cuts off a smaller piece of the matrix of experience so that it can be managed more easily. For example, the element Make Believe has four related components in the K-6 grade span: Magic and Wonder in Bands I, II, and III; Fabulous Creatures in Bands I and II; Wishful Thinking in Band II; and Little People in Bands II and III. Determining factors in the selection of components in each band were students' interests and development, and availability of materials.

The smallest unit of organization in the literature program is the context. A context is a collection of materials which will implement a program objective, or support a particular learning experience, such as an awareness that one's imagination is capable of anything (Fabulous Creatures), or that one of the Hero's first jobs was to make the Earth a more comfortable place for people to live (Heroes and Leaders), or that Jazz music was closely bound up with the lives of black people (Rhythms of Art). A context may contain three or four different stories, or it may consist of one or two stories and a few poems, or a book on making musical instruments, along with two or three other stories. There is no set number and no set type. Planners gathered up selections which "communicated" with each other in some way--selections which re-state ideas, or give differing points of view, or reflect a tone, or operate in contrast with each other.

In teaching the program, the teacher selects at least one context from each component so that in any give year the students are exposed to the full scope of the program. In a sense the five elements provide the framework for a "spiral" in the Literature program.

The general organization of the elementary literature program is shown below:

ELEMENTARY LITERATURE PROGRAM
GRADES K-6
(Non-sequential 2-4 week units)

BAND I	BAND II	BAND III
MAKE BELIEVE:		
Magic & Wonder	Magic & Wonder	Magic & Wonder
Fabulous Creatures	Fabulous Creatures	Bigger than Life
	Little People	Little People
	Wishful Thinking	
WORLD AROUND US:		
Rhythms of Man	Rhythms of Man	Rhythms of Man
Rhythms of Art	Rhythms of Art	Rhythms of Art
Rhythms of Nature	Rhythms of Nature	Rhythms of Nature
GROWING UP:		
Imagining Things	Imagining Things	Imagining Things
Self & Family	Self & Family	Self & Others
	Insights	Insights
SOCIAL ORDER:		
Animal People	Animal People	Heroic Deeds
Heroes & Leaders	Heroes & Leaders	Acquiring Wisdom
ADVENTURE:		
Narrow Escapes	Narrow Escapes	Encounters
		Searches

4. Activities

In order to ensure a growing understanding of literature for all students in the schools, the Literature program is designed to present literature in ways which are faithful to the nature of both literature and children. Activities such as creative drama, games and puzzles of various kinds, and artwork involving the various art media are the means which make this possible. All the activities in the program have the general aim of engaging students with many stories and poems; in addition, each activity has a specific aim which is related to a specific story and to the on-going development of the child who works with it.

Creative drama involves children with characters, events, setting, and tone. Because they render characters, they project themselves into other roles, thus developing the imagination and feelings. Since children are free in a creative drama activity to move, talk, and imagine, verbal facility and fluency are developed also. Creative drama is also an effective means of motivating discussions and review of stories and poems which the children encounter.

Games sustain a child's involvement with a story or poem. They allow focus on an important point or certain aspects of a literary work. Some games bring out plot structure; others, literary motifs or conventions; still others, various thematic concerns or character relationships. They enable children to encounter literary concerns in a direct, experiential way, rather than through intellectual abstractions. In the literature program, all games are instructive as well as enjoyable. They reflect and support serious educational purposes.

Because children work well with paints and clay, art activities come naturally in a literature program. There is a fundamental relationship between literature and art in that both visual art and literature, a verbal art, are renderings of ideas. All art communicates through symbols, and when children write a story, paint a setting, or make a puppet which talks for them, they are working with imaginative constructs in various forms, and they are working with the language of literature.

In addition to these activity modes, there are other activities which require listening to stories read by the teacher, other students, or on tape; discussion, both large group and small group; and composing, both individual, small group, and total class (encompassing narrative, descriptive, expository, and persuasive modes).

B. Evaluation Design

The HEP Literature Band I subprogram for grades K-2 was implemented in at least one classroom in every elementary school throughout the state (See Chapter II). The major evaluation efforts during the 1970-71 school year for the Literature subprogram were centered on three data gathering techniques: classroom teacher questionnaires, classroom observations, and parent interviews.

The difficulties encountered in developing evaluation strategies for the Band I subprogram were the immature level of children using the program (grades K and 1), the nature of literature which raises problems in developing objective evaluation instruments, and the nature of the Band I program with its emphasis on enjoyment and literature as a process. It was felt, therefore, that the three techniques designed for gathering data would be the most adequate and desirable method for assessing the new Band I literature program and the extent to which the goals of the program were being realized. It is assumed that the installation of the upper elementary levels of the Literature subprogram (Bands II and III), and the intermediate (Band IV) and senior high school (Band V) programs will provide a better basis for evaluating the program.

The sample populations for the teacher questionnaires, parent interviews, and classroom observations were the same as for the evaluation of the Skills subprogram (See Chapter III for details on the sample population).

All teachers in sample HEP classrooms were asked to submit their questionnaires in June, 1971. In addition, all sample HEP classrooms were observed in May and June, 1971, by data collectors. The parent interviews were conducted by the data collectors in May and June, 1971. Discussion of the findings are presented below.

C. Findings

1. Classroom Teacher Questionnaire on the HEP Literature Subprogram

In June 1971, a sample of classroom teachers were surveyed through a questionnaire to obtain attitudinal reactions to the Hawaii English Project Literature subprogram. The sampled teachers were the same as those selected for evaluation of the Language Skills subprogram.

A total of eighty-three teachers responded to the survey, including fifty-one from Installation schools, twenty-three from Pilot schools, and nine from Field schools. Seventy-one of those responding taught in three-on-two classrooms, while ten taught in self-contained settings and two were from six-on-four classrooms. The majority of teachers taught in grades K-1 classrooms (54), while 6 taught in K classes, 11 in K-2 classes, 5 in K-3 classes, and 4 in 2-3 classes. Three teachers failed to indicate the grade levels taught.

In terms of professional background, over 61% of the respondents had earned degrees or teaching certificates equivalent to five years or more of professional training. The average number of years in teaching experience was slightly over nine years. Of the eighty-two teachers responding to the item (one did not answer the item), only eight teachers in the sample group had over one year of experience with the HEP Literature subprogram. The eight were teachers from Field and Pilot schools. All but three teachers were presently enrolled in or had taken professional course work within the past three years. Eleven teachers failed to respond to the item on the questionnaire.

When asked whether they had attended the special district workshop for orientation to the Literature subprogram, over 67% of the teachers indicated that they had. By contrast, however, only slightly more than one-half (53%) felt that it was essential for teachers to receive special training for teaching in the program. Those who answered affirmatively were asked to list areas that needed to be emphasized. The following is a list of areas mentioned by teachers:

Areas Mentioned	Number of Times Listed
1. Creative dramatics	15
2. How to teach literature in large groups (e.g. 3-on-2)	4
3. Classroom management	2
4. Expansion of lessons	2
5. Rationale, overview, objectives, etc. of program	2
6. Relationship of literature to total learning experience	1
7. Follow-up stories	1
8. Role/attitude of the teacher	1

To determine the extent to which emphasis was being put on the new program, teachers were asked to indicate the number of times HEP literature was taught each week. About forty-six percent of the teachers indicated that they taught the literature program daily, as suggested by Project planners. Responses to the item are shown in Table 73 below.

Table 73. Time Spent Teaching the HEP Literature Program

	Field School Teachers	Pilot School Teachers	Installation School Teachers	Total
Daily	7	3	28	38
4 times a week	2	6	7	15
3 times a week		12	8	20
2 times a week		2	7	9
1 time a week			1	1

In terms of the average time spent in teaching the Literature program, about 82% of the respondents stated that they spent between 20-40 minutes for each session. About 10% indicated they spent less than 20 minutes per lesson, while about 8% stated they spent an average of more than 40 minutes on each lesson. The data thus suggests that though the vast majority of teachers adhered to the suggested HEP Literature time allotment, there is still further need to work with them in this area to make literature an integral part of the elementary school curriculum.

In relation to information about the program, teachers were asked whether the HEP Literature subprogram offered a wide variety of selections, activities, and learning approaches. Nearly 93% of the teachers responded affirmatively with regard to the selections, while about 86% and 77% similarly responded to the activities and approaches items respectively. About 6% did not feel that the program offered a wide enough variety of selections, while 12% felt that the program lacked a wide variety of activities and 14% felt that it lacked a variety of approaches to learning.

When asked whether the literature program encouraged active participation, divergent responses and/or expression, and exploration and/or discoveries on the part of pupils, the responses were overwhelmingly favorable. Classroom teachers responded affirmatively 94, 98, and 93 percent respectively to each of the three items. However, when asked whether all of the suggested activities were appropriate or necessary for the selections, or appropriate for the intended grade levels, the responses revealed a greater range of disagreement. This disagreement is understandable inasmuch as the materials were designed for heterogeneous classes. Table 74 reveals the data related to these three items.

Table 74. Appropriateness of the Suggested Activities

	Yes			No			Don't Know			No Response		
	F	P	I	F	P	I	F	P	I	F	P	I
Appropriate for the selections	7	16	30	1	2	14	1	1	7		4	
Necessary for the selections	4	11	16	4	7	20	1	4	15		1	
Appropriate for intended grade	4	17	27	3	2	11	1	1	7	1	3	6

The data in Table 74 indicates that while 67% of the respondents felt that all of the suggested activities were appropriate for the corresponding selections, over 21% felt otherwise, and 11% didn't know. Four teachers failed to respond. To the question of whether all of the suggested activities were necessary for the corresponding selections, only about 38% indicated that they were, whereas another 37% felt otherwise and about 24% didn't know. One teacher failed to respond to the item. With regard to the appropriateness of the suggested activities for the intended grade levels, over 65% felt that the activities were appropriate. About 22% disagreed, 12% didn't know, and ten failed to respond.

A corresponding item to the above asked teachers to list selections/activities that were sources of problems, and to describe the problems associated with each. The responses are contained in Table 75 on the following page.

Table 75. Problems Associated with Selections/Activities

Selection/Activities and Nature of Problem	Number of Times Listed
Rhythms of Art: too difficult for K's and immature pupils	5
Activities are too repetitive	2
Lacking in activities for large groups	2
"Baba Yaga": too difficult	2
Too difficult to collect materials for some activities (e.g. cans, metal objects)	2
Activities are too low level for teachers and children	1
"Seasons": too difficult	1
Component 4: too much poetry	1
Poetry context: too difficult	1
"Puppets for Punch and Jonathan": require too much of teachers' time and assistance	1
Component 1 (Giants): too rhythmic; teachers had to interpret too much	1
"Woods Fairy": low interest	1
Lack variety of activities	1
Activities need to be coincided with current events	1
"Horse Who Lived Upstairs": Puzzle didn't come out as expected	1
"Sally and Manda": Not motivational	1
Need more materials	1

The data in Table 75 show that generally the greatest problem seemed to be related to the difficulty some pupils were having in specific activities and/or with specific selections. The Rhythms of Art context was mentioned most often, along with the need for more activities geared for larger groups (e.g. 3-on-2 class size). This appears to be consistent with findings discussed earlier, although it was never intended by program planners for any activity to be used with all children in very large groups (e.g. the entire three-on-two class) at the same time.

Respondents were also asked whether the program was flexible and whether it was convenient for teachers to use. Over 95% of those responding felt that the Literature program was both flexible and convenient for teachers to use. The findings thus suggest that the program was flexible enough to meet individual or group needs and could be used in any order without jeopardizing the continuity of the overall program goals.

Asked to indicate whether the Literature program met the needs of four different types of pupils, those surveyed responded overwhelmingly that the program met the needs of the bright and average ability children (90% and 95% respectively). In regard to the needs of the low ability pupils, only about 58% indicated that it did, whereas about 23% disagreed and 12% didn't know. With regard to non-English speaking pupils, the majority of respondents (43%) didn't know whether these children were helped by the program. It is speculated that most of those responding in this latter category did not have non-English speaking pupils in their classrooms. Of those who apparently had non-English speaking youngsters, about 22% indicated that the program had helped, whereas almost 29% responded otherwise.

Asked to indicate the type of pupils the Literature program appeals to the most, respondents listed the following*:

Type of Pupils	Number of Times Listed
1. Average ability pupil	37
2. High ability pupil	24
3. Others	6
4. Creative pupil	2
5. Low ability pupil	1
6. All	15
7. No response	2

The findings clearly show that the majority of respondents (70%) felt that the HEP Literature program appealed to the average and high ability students the most. Interestingly, about 17% of the respondents felt that the program appealed to all pupils.

More than one-half (58%) of the respondents felt that the grouping of selections were appropriate for each context, as indicated by the data from another item on the questionnaire. Only about 11% felt otherwise and a like number didn't know. Furthermore, in a related item, only three teachers indicated they knew of another literature program which they considered better than the HEP program. The "Nebraska" program was listed by two of the three teachers who answered affirmatively to the item.

In contrast to earlier data, respondents indicated that the HEP Literature program provides children with the opportunity to participate in large, small, and individual activities. All but one respondent stated that the program offers participation for large groups, whereas 89% and 87% respectively felt that the program provided for small group and individual participation. It should be noted, however, that the small and large group sizes used for this particular item were interpreted to mean about 20-25 and 3-10 pupils respectively, while the large group size in the previous findings was mentioned as being about 60 or more pupils. Thus, the results seem to indicate that although the program provides opportunities for participation in varying size groups, teachers would like to have more activities and training in handling the larger groups.

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* Some teachers listed more than one category.

Teachers were also asked whether the HEP Literature program contained a greater number of stories and poems than previous non-HEP literature programs they had worked with. About 53% felt that it did, whereas about 20% indicated otherwise. About 11% did not know and over 15% indicated that the question was not applicable, or did not respond.

In three related items, teachers were asked whether the HEP Literature program helped children become more fluent than previously in ideas, speaking, and perception. About 59% of the respondents indicated that the HEP Literature program had helped children increase their fluency in ideas, while about 5% disagreed and 30% didn't know. Slightly more than one-half (52%) indicated that children became more fluent in speaking, whereas about 5% disagreed and over 38% didn't know. With regard to fluency in perception, about 58% of the respondents felt that children became more perceptive, while about 4% disagreed, and 35% didn't know.

Another related question asked whether the HEP Literature program helped students in developing listening skills. Respondents overwhelmingly (89%) felt that that the HEP Literature program had helped pupils develop the ability to establish relationships among stories and characters. Only one teacher disagreed while about 12% didn't know.

With regard to the quantity of materials (e.g. number of copies of books, software items, etc.), all but three teachers felt that there was a sufficient quantity of books in the HEP Literature program. Only one respondent felt otherwise, while two did not respond to the item. With regard to software, however, only 59% felt that the quantity was adequate, while about one-third of the teachers felt it was not. In an optional portion of the item, six teachers indicated that the number of teachers' manuals was inadequate, while two teachers felt there was an insufficient number of phonograph players. It should be noted, however, that phonograph players were not scheduled to be provided in the literature kits since it was assumed by project planners that schools had them as standard classroom equipment. A number of teachers, on the other hand, indicated that for some components there were too many books and software.

Teachers were also asked whether the Teachers Manual was easy to use, and if not, what suggestions could they make for improving it. Over 84% of the respondents indicated that the manuals were easy to use. Only ten teachers felt that it was not and one did not respond. Among the suggestions listed were the following:

Suggestions Listed	Number of Times Listed
1. Categorize and list all selections for each component	7
2. Distribute more Teachers Manuals	6
3. Correct vague directions for some games	4
4. Label software (e.g. game boards) to be identified with each selection	1
5. Package game materials in one container	1

About one-third of the respondents indicated that they did not follow the contexts in the sequence suggested by planners. Among the reasons mentioned most often for this were the time and appropriateness-of-occasion elements, the level of difficulty of particular selections/activities, and the lack of sufficient materials and equipment to conduct the lessons. Others stated that they modified the sequence on occasion because of management problems, lack of pupil interest, and the desire to utilize their own ideas in conjunction with suggested program activities.

In two related items, teachers were asked to indicate whether the program was suitable for teaching in the three-on-two and self-contained classroom organizations. Table 76 reveals the data.

Table 76. Suitability of Teaching the HEP Literature Program in 3-on-2/SC Classrooms

Class.	Yes			No			Don't Know			Not Applicable/ No Response		
Org.	F	P	I	F	P	I	F	P	I	F	P	I
3/2	8	16	40		4	1			2	1	3	8
SC	3	6	20			2	1	1	5	5	16	24

The findings in Table 76 show that of those who had experience with the 3-on-2 classroom organization (71), over 90% felt that it was suitable, whereas only five teachers disagreed and two didn't know. In regard to self-contained classrooms, more than three-fourths of the respondents indicated that the program was suitable, two teachers indicated otherwise, and seven didn't know.

Generally, those who felt that the 3-on-2 classrooms were not appropriate for teaching the HEP Literature program preferred smaller groups, or an isolated space within the classroom that would be free from distractions. Similar reactions were expressed by those not favoring self-contained classrooms for the Literature program.

In a related item, about 57% of the teachers indicated they had not encountered major problems with the HEP Literature program in the 3-on-2 classrooms and about 65% similarly felt they had no major problems in the self-contained room. Conversely, about 42% and 20% respectively stated they had some problems in the 3-on-2 and self-contained classrooms. The major problems associated in both types of classrooms included the lack of sufficient equipment, materials, and Teachers Manuals; scheduling of the Literature program with other subject areas; too large in class size; not enough time for literature and in conjunction with the need to cover other subject areas; and the lack of adequate space in an isolated area. Two teachers also had classroom management (e.g. discipline) problems, one teacher stated that there was a need for other suggested activites, and another indicated that many of the selections were previously covered in class.

The foregoing findings thus reveal that the problems pertain not to the way in which the program was conceptualized and developed but are primarily logistical and management in nature. It is assumed that as installation practices are refined and teachers become increasingly familiar with the program, these problems will lessen in intensity.

Two questions related to the installation procedures of the program revealed that over 61% of the teachers felt that the sharing of the HEP Literature materials on a rotational basis was satisfactory, while 37% felt that it was not. Among suggestions for improving the sharing procedures were the following:

Suggestions Listed	Number of Times Listed
1. Each school should have one component or set	8
2. Distribute two or more components to each team and then rotate materials	8
3. Improve the inventory system	4
4. Continue the Installation Teacher service	3
5. Permit use of materials for a longer period of time	2
6. Reduce the number of teams/schools sharing the materials	2
7. Improve the transportation system	2
8. Permit teachers to review all bands prior to use	2
9. Rotate seasonal selections during appropriate season	1
10. Reduce the number of copies (books)	1
11. Distribute only the software and teachers manual and have schools purchase their own books	1

Suggestions for improving the delivery procedures were as follows:

Suggestions Listed	Number of Times Listed
1. Change packaging system	3
2. Provide assistance in transporting materials	3
3. Assign one person the responsibility for delivery, and pay mileage	3
4. Label software for each appropriate selection	2
5. Distribute one set per school	2
6. Distribute two sets per school and then rotate materials	1
7. Share the materials through the school library	1
8. Provide push-carts for transporting materials	1
9. Supply each school with software and list of selections and let school obtain books	1

To determine whether the recordkeeping system was effective for the intended purpose (contexts covered by pupils), teachers were asked to indicate whether they felt the system was satisfactory. Close to 64% of the respondents indicated that the recordkeeping system was satisfactory, 8% stated otherwise, 18% didn't know, and eight teachers did not respond to the item. Those who felt the recordkeeping system was not satisfactory felt that the procedure was unnecessary. They indicated that it was time-consuming and questioned its purposes. Some teachers wondered how make-ups would be conducted, while others indicated that there was no harm in children participating again in lessons previously covered.

Similarly, teachers were asked whether the suggested forty-minutes daily allotment for the Literature program was adequate. Sixty-seven teachers or 80.7% indicated that the time allotment was adequate, while only five stated otherwise, and the rest did not respond or didn't know. Teachers offering recommendations felt that the time elements should be more flexible. That is, the time allotted should be dependent on the selection, interest of children, etc. Three teachers also felt that the requirement to teach literature on a daily basis was too much. Instead, they recommended that less than a daily requirement be permitted. Another teacher suggested a thirty-minute period and another suggested twenty minutes daily.

The majority (88%) of teachers felt that the software used in the program was adequately durable when asked to rate the durability of program materials. Only five teachers indicated that the materials were not durable, whereas three felt that the software was very durable. Two teachers failed to respond to the item.

To determine whether there were carry-over effects of the HEP Literature program on related areas, teachers were asked to describe the effects on four language skills areas. The majority of teachers responding to the item felt that for reading, the Literature program appears to stimulate motivation and interest in reading. A smaller number of teachers also felt that the program also exposes children to broader fields for further explorations. Only seven teachers felt that there was no or little major effect taking place in terms of developing reading skills, while four weren't sure.

With regard to speaking skills, respondents to the item almost unanimously indicated that the HEP Literature program helped children to develop their ability to express themselves better. This included having the opportunity to express themselves orally in class, the building of a greater vocabulary, and the ability to communicate ideas better. Only three teachers indicated that the program had very little effect on the development of speaking skills.

Those who felt that the HEP Literature program had some carry-over effects on listening indicated that the program helps to develop better listening skills and habits, and helps to make children more attentive and aware of stories. In addition, some teachers felt that pupils learned to follow directions better, became more interested in books and were able to comprehend better in other reading activities. Three teachers indicated that very little benefit was provided for children, while another didn't know.

Very little effects were noticed in the area of writing, as most of the teachers surveyed had kindergarteners or first graders who were not ready for extensive writing. However, four teachers indicated that their pupils developed more imagination and creativity in their descriptive writing, while another stated that her students wrote unique poems on one occasion.

In a related optional item, teachers noted that carry-over effects of the HEP Literature program covered a broad spectrum of subject fields. Particularly noticeable were more imagination and creativity in art work. In the opinion of respondents, pupils also became more expressive and creative in dramatics, physical activity, and music. In addition, one teacher noted that children became more aware of things in their science activities, while another felt that the program helped to develop aesthetic values. Two teachers felt that the personal-social relationships of their children had improved in game activities, while another indicated that the program helped her pupils to broaden their personal experiences and background.

To determine whether specific contexts needed additional selections or activities, teachers were asked to identify these contexts on the questionnaire. The majority of teachers responding indicated that additional selections and activities were needed for the K contexts for all components except Imagining Things. The data thus support earlier findings that many of the selections are too difficult for kindergarteners and immature pupils and support the need for development of more materials for very immature children. See Appendix 24 for listing of specific responses.

In two related items, respondents were asked to list the selections and activities that could be deleted from the HEP Literature program. The findings show that of teachers responding, some felt that the selections with poems were too difficult for the children. In addition, some of the game activities created some problems for children. Appendix 25 gives a detail listing of all responses.

Teachers were also asked to react to the program's approach in developing children's modes of expression. Respondents were overwhelmingly in agreement with the HEP Literature philosophy in developing children's modes of expression. Almost 93% were in favor with the "talking through puppets" approach, while only one teacher was not. Five others didn't know or did not respond. Close to 88% and 92% respectively also were in agreement with the "making up stories" and "body movements" method, while none disagreed with either approaches. Ten and seven teachers respectively did not respond or didn't know. The results thus suggest that teachers are almost fully in accord with the learning approaches used in the HEP Literature program.

When asked to indicate the strengths of the Literature program, over thirty of the respondents listed the variety of materials, selections, activities, etc. in the program. Nineteen listed the availability of a planned and organized literature program, eighteen listed various academic related benefits for children, and seventeen noted that the selections and activities were excellent. In addition, three teachers stated that the directions were easy to follow and one teacher noted that the program had flexibility. Several teachers listed more than one category, while others did not respond to the item.

In terms of weaknesses of the program, teachers responded with the following:

Weaknesses Listed	Number of Times Listed
1. Difficulty of some selections for pupils	8
2. Activities are repetitious; lack variety	8
3. Poor organization (procedures are confusing, poor labeling or materials, poor inventory procedures, containers too bulky and heavy)	8
4. Not enough materials, teachers manuals	7
5. Sharing problems (no storage space, materials delivered late)	7
6. Selections in rotation inappropriate with current events, seasons	5
7. Program doesn't meet the needs of non-English speaking, immature and low ability pupils	4
8. Pupils/teachers lack background to conduct creative drama activities	3
9. Difficulty in collecting suggested materials for activities	3

10.	Not enough time	3
11.	Some activities too lengthy	2
12.	Too many copies of books	2
13.	Time block too long	1
14.	Lack overview of entire Band I	1
15.	Software not durable	1
16.	Group size too large	1
17.	None	1

The findings suggest that classroom teachers basically accept the HEP Literature program but there is still a need to refine specific areas within the program, and procedures relating to the installation of the program.

In another portion of the questionnaire, teachers were asked to indicate the impact of the program on pupils. All but four respondents stated that their students liked the selections. Of the four, one didn't know and three did not respond to the item.

With regard to the activities, all but five teachers indicated that their students liked the suggested activities used in the program. Only two disagreed while three teachers failed to respond to the question.

The foregoing findings were further supported by the fact that over 89% of the teachers indicated that their pupils were willing to participate in the activities conducted during the literature period. Only two teachers indicated otherwise, while seven did not respond.

To determine the impact of the Literature program further, teachers were asked whether their pupils had asked to borrow the books in the program. About one-half (49.3%) of the respondents indicated that children wanted to borrow the selections, while about 41% indicated otherwise. It should be noted, however, that at least twelve teachers stated that the children did not have the opportunity to borrow the books, while others stated that browsing corners had been established for children to use.

In the final question in this portion of the survey, teachers were asked whether they felt that the pupils had shown some growth in their knowledge and understanding of literature as a result of the HEP program. About 30% of the respondents indicated that some growth was noticed, while only about 7% disagreed. The majority of those surveyed (42%) did not know, while another 20% failed to respond to the item. The respondents who felt that children had shown some growth in literature supported their responses with comments such as the following:

"Children are discovering the 'discovery' of the story"
"Children can see the similarities and differences between stories"
"They appreciate and enjoy the selections and are becoming more aware of different types of stories and poems"
"They are able to express themselves better"
"Greater attention span"
"Greater imagination and concentration; increased vocabulary"

In the final portion of the questionnaire, teachers were asked whether the period of time (one month) allotted for each component was adequate to cover the suggested contexts. Slightly more than three-fourths of the respondents (77%) indicated that the time allotted was adequate, while another 12% felt otherwise, and the rest didn't know or failed to respond.

The major problems encountered by those who felt that the time allotment was inadequate included scheduling difficulties and the need to modify the suggested activities and selections to meet the needs of pupils and special events (e.g. Christmas programs). The scheduling problems became particularly acute when different school events and holidays were scheduled on the school calendar, and when teachers had to adjust the time block of the school day to accommodate the teaching of other subject areas.

To provide planners with feedback for program adjustments, teachers were asked to list components they had inadvertently taught in their entirety. A total of fifteen (18%) teachers indicated that they had taught some components in their entirety, while three-fourths indicated otherwise. The only findings of any significance appear to be in the "Animal People" and "Self and Family" components, where four teachers each had taught them in their entirety. Appendix 26 lists the responses made by teachers relating to this item.

Finally, teachers were asked whether they would prefer the time spent in teaching the HEP Literature program be spent on some other subject area. Only three teachers felt that the time should be spent on some other subject area, while 70 or 83% of the respondents felt that the time was justified, and 11 teachers didn't know or failed to respond. The data clearly indicated that the majority of teachers in the HEP Literature program felt the program to be well-worth the time spent teaching it.

2. Classroom Observation

In May and June, 1971, an observation schedule was developed as part of the evaluation network for the Literature Band I subprogram. Data collectors observed each of the sample classrooms during one daily period spent on the literature program.

A total of 48 (92%) of the 52 sample classrooms were observed, of which 28 were three-on-two and 20 were self-contained rooms. Twenty-five of the classrooms represented grades K-1 combinations, while fourteen were grade Ks, four were grades 2-3, three were grades K-2, and two were grade 3.

The time spent by classroom teachers on the literature program during the observation ranged from 15 to 75 minutes in three-on-two classrooms and from 20 to 60 minutes in self-contained settings. Thirty minutes was the mode for self-contained classrooms, whereas it was 35 minutes for three-on-two rooms. The average time spent overall on the literature program was 36.8 minutes, while by classroom organization it was 35.0 minutes for the three-on-two and 39.7 minutes for self-contained classrooms.

The rotation* of components among classrooms made it possible for all ten of the Band I components to be observed. Appendix 27 reports the frequency of components used in classrooms during the observations.

Since classroom teachers had the option of choosing the contexts they wished to teach from the components in rotation, they selected contexts** that were appropriate for the ability and interest levels of their children. The data shown in Table 77 reveal that the preferences of selections by classroom teachers were quite varied for each of the ten components. The data also gives an indication of the wide variety of selections available in the Literature subprogram for classroom use.

The data in Table 78, when compared with the tabulations in Table 77, further support the contention that the Literature subprogram offers a wide variety of options for classroom teachers. The data show that besides the reading of selections, discussion activities relating to the selections were conducted most often by teachers during the observation period. Discussion of the selections read was a specific activity conducted by about three-fourths of the classroom teachers during the observation. Art work was another specific activity that was widely used by teachers. Over 37% of the teachers used this form of activity. In addition, over 18% of the teachers used creative dramatics as an activity during the observations. Interestingly, there was only one incident in which the teacher discontinued the Literature session after reading the selection because she felt that the children were not ready to continue.

The wide variety of activities used by classroom teachers during a single session, as revealed in Table 78, suggest that teachers not only had many options for choosing selections and activities but were given the flexibility to adjust their lessons based on the needs of their particular students. The findings thus suggest that the protocols established for conducting the HEP Literature subprogram were generally being adhered to.

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* One component was rotated and shared by approximately 5-8 classrooms for about a one-month period. Teachers had the option of selecting the appropriate contexts for their students.

** Contexts are groupings of stories, poems, non-fiction pieces, songs, or pictures which focus on a particular quality, characteristic, theme, or literary concept.

Table 77. Selections and Poems Used During Observations

	Component/Title of Selections	3-on-2	S.C.	Total
#1:	Magic & Wonder			
	Moon Mouse	1		1
	The Mitten	1		1
	Moon Man		1	1
#2:	Fabulous Creatures		1*	1*
	Where the Wild Things Are	1		1
	Pin the Reluctant Knight		1	1
#3:	Rhythms of Man			
	Five Cent, Five Cent	1		1
	Oasis of the Stars	1		1
	City in the Summer	1		1
	Pilgrim's Party		1	1
#4:	Rhythms of Nature		1*	1*
	A Blue Seed	1		1
	Old & New Poems, Group A**	1		1
	Feather on Fur; The Bird's Nest**	1		1
	Be Nice to Spiders		1	1
#5:	Rhythms of Art			
	Story in the Sand	1		1
	Black City**	1		1
	The Rub Book		1	1
	F is the Fighting Firetruck**	1		1
	Round & Round & Square		1	1
#6:	Imagining Things	1*		1*
	The Dragon in the Clock Box	1		1
	Magic Michael	1		1
	And To Think I Saw It on Mulberry Street	2		2
	Sir Kevin of Devon		1	1
#7:	Self & Family			
	We Were Tired of Living in a House	1		1
	A Pocketful of Cricket		1	1
	Little Racoon and the Outside World		1	1
	One Kitten for Kim	1		1
#8:	Animal People			
	Cannon Ball Simp	1		1
	The Stolen Necklace	1	1	2

Dragon Stew	1		1
The Hare & the Tortoise	2		2
The Coconut Thieves; Katy No-Pocket	1		1
Look, There is a Turtle Flying		1	1
#9: Heroes & Leaders			
Swimmy	1		1
The Fooling of King Alexander		2	2
A Gift-Bear for the King		2	2
Horton Hears a Who		1	1
#10: Narrow Escapes			
Mike Mulligan & His Steam Shovel	1		1
Little Toot on the Thames	1	1	2
Mr. Miacca; Strange Dissappearance of Arthur Cluck	1		1
The Three Billy Goats Gruff	1		1
Element: The World Around Us	1		1
Totals	30	20	50

* No indication of title of selection given
** Indicates selection was a poem

Table 78. Activities Conducted During Observation

	Activities	F	P	I	Total
1.	Selection read, discussion activities	4	2	7	13
2.	Selection read, art activities	2	2	3	7
3.	Discussion of selection previously read, art activities		1	4	5
4.	Selection read, discussion & art activities			5	5
5.	Selection read, discussion & creative dramatics activities		1	3	4
6.	Selection read, participated in game activities	2			2
7.	Selection read, showed pictures from selected books, played music with a story	1			1
8.	Selection read, search for story-related objects		1		1
9.	Singing, story on record, creative dramatics activities			1	1
10.	Selection read, discussion, art & creative dramatics activities			1	1
11.	Selection read			1	1
12.	Discussion of selection previously read, creative dramatics activities; new selection read and discussed			1	1
13.	Art, discussion, & use of imagination activities			1	1
14.	Listening to story record & creative dramatics activities			1	1
15.	Selection read, discussion, & listening to records			1	1
16.	Selection read, game, individual singing, & discussion activities			1	1
17.	Discussion of selection previously read & search for objects in nature activities			1	1
18.	Selection read and individual booklet activities			1	1
19.	Discussion, selection read, creative dramatics, & art activities			1	1
20.	Discussion, selection read, game & discussion of follow-up activities			1	1
21.	Discussion of previously read selection, creative dramatics activities			1	1
22.	Discussion of previously read selection, game activities			1	1
23.	Selection read, picture puzzle & discussion activities		1		1

One of the tasks required of data collectors was to indicate whether they felt that the majority of pupils appeared to enjoy the selections and activities during the observations. The data collectors were overwhelmingly affirmative in their responses. Only one data collector felt otherwise (pertaining to the selections), while three others chose not to respond to the item.

When the data collectors were similarly asked to indicate whether the majority of the pupils actively participated in the activities, the response was again overwhelmingly in the affirmative. Only one data collector reported that pupils did not participate actively, while two others failed to respond. The foregoing findings, as opined by the data collectors, provide strong evidence that pupils enjoy the HEP literature program.

To determine whether the literature program provided opportunities for conducting lessons in flexible grouping patterns, data collectors were required to indicate whether students had the opportunity to participate in large group (20-25), small group (10-15), and individual activities. Data collectors reported that over 79% of the lessons observed provided opportunities for large group activities, while 15% did not. Data collectors failed to respond in three instances.

With regard to small group activities, the responses were equally divided. While 38% of the data collectors felt that the pupils were provided opportunities for participation in small group activities, 38% indicated otherwise. One fourth of the data collectors failed to respond to the item, perhaps because they did not observe small group activities during their visits.

One-half of the data collectors reported that the classrooms they observed provided for pupil participation in individual activities, while about one-fourth indicated otherwise. Slightly less than one-fourth failed to respond. The latter findings implies that the data collectors did not observe individual activities during their visits to the classrooms.

The foregoing findings related to the grouping patterns suggest that generally most of the activities in the Band I Literature subprogram were designed for large groups of 20-25 pupils, or that teachers found this group size comfortable to work with. On the other hand, the data further show that the program is sufficiently flexible to permit teachers to make adjustments in their grouping patterns based on the selections and activities chosen for classroom use.

The final task for data collection during the observation required the data collector to indicate whether there were evidences of plans for follow-through activities. The purpose of this phase of the observation was to obtain further feedback as to whether the basic format of the literature lessons were being adhered to. That is, the options available for classroom use basically provide opportunities for follow-through activities. The purpose of this phase of the observation, then, was to determine whether teachers were conducting follow-through activities beyond the conventional reading-of-selection/discussion approach. Over three-fourths of the respondents reported that there were plans for follow-through activities during the observations, while about one-fifth indicated otherwise. One data collector failed to give an indication. The findings thus suggest that most of the teachers using the HEP literature subprogram utilized the suggested format and provided pupils with opportunities for active pupil engagement.

3. Parent Interviews

To assess the impact of the new curricular design, interviews with parents on the Literature subprogram were conducted in conjunction with the Language Skills interviews in May and June, 1971. The rate of response for the interviews was 57% (118) and are described in detail in the Language Skills section of this report.

The checklist used for the interview asked five basic questions about the Literature subprogram. An option to add statements regarding the program was also included at the end of the form.

The initial item asked whether the interviewees were aware that the Literature subprogram was a regular part of the curriculum for kindergarteners and first graders. Only 35.5% of the respondents were aware of this fact, while 63.5% were not. One parent did not respond to the question.

In a related question, respondents who has answered the initial question were asked to indicate their source of information regarding the Literature subprogram. Table 79 below reports the data.

Table 79. Sources of Information Regarding the Literature Subprogram

Source		Number of Times Listed
School (notice, meetings, conferences)		9
Child		7
Teachers		6
Several Sources:		5
School notice, PTA, and child	1	
Child and Teacher	1	
Central office and teachers	1	
Child and TV	1	
PTA and professional dialogue	1	
OEO		1
PTA		1
CAP		1
HEP Planner		1
Other interviews		1
No response		10

Respondents were also asked whether they favored introduction of an organized literature program for kindergarteners and first graders. The response was overwhelmingly favorable. Only 2% responded negatively, and 5% gave no response to the question.

In three related questions, parents were asked to indicate whether their children talked about stories/poems they had heard or read. If the response to the statement above was in the affirmative, the parents were further asked to indicate whether their children enjoyed the selections and activities. Table 80 below reports the data.

Table 80. Opinions About the Hawaii English Literature Subprogram

	Yes	No	No Response
Does your child talk about stories/ poems they have heard or read?	93	23	2
If yes to the above, does your child indicate that he likes the:			
selections:	67	7	19
activities:	64	24	5

The findings in Table 80 show that although parents were not too familiar with the Literature subprogram, their children were discussing the Literature activities they had encountered in school. Over 78% of the parents responded affirmatively to the question, while over 19% said their children did not talk about the activities at home. Slightly less than 2% did not respond to the question.

Of the respondents who answered affirmatively to the question above, slightly less that three-fourths indicated that their children enjoyed the selections and a little over two-thirds indicated their children enjoyed the activities. About 7% stated that their children did not enjoy the selections, and similarly over one-fourth indicated their children did not enjoy the activities. Over 20% and 5% of the parents did not respond to the selection and activities questions respectively.

In the final section of the questionnaire, respondents made the following comments (Table 81):

Table 81. Comments About the Hawaii English Literature Subprogram

Comments		Number of Times Listed
Favorable Comments (extremely good; exciting; excellent; terrific; good; stimulates learning; makes learning fun; beneficial for later years; my child loves books; enhances interest; child far advanced over relatives and twice as much interest in school; wide selection of stories, poems and activities)		23
Would like to know more about the program		4
Program expansion:		3
should be continued	1	
would like child to continue next fall	1	
should include materials from other countries	1	
Would like to know more about achievement gains		1
Basically good but lacks continuity; capital outlay would be the same as existing programs		1
Should emphasize more phonetics		1

The data obtained from these interviews indicate a very favorable attitude among parents regarding the Literature subprogram. Respondents were very much in favor of presenting an organized literature program in the primary grades, and their comments indicated that their children were enjoying and responding favorably to the selections and activities.

The results also seem to indicate that the Literature subprogram provides an avenue for parent-child communication. More than three-fourths of the interviewees indicated that they have had discussions with their children about the literature activities.

On the less favorable side, it appears that parents know very little about the HEP Literature subprogram. A concerted effort by schools and HEP planners to keep parents abreast of the new program should be undertaken.

V. THE LANGUAGE SYSTEMS SUBPROGRAM

V. THE LANGUAGE SYSTEMS PROGRAM

A. Basic Assumptions and General Goals of the Language Systems Program

The Language Systems curriculum rests jointly on the discipline of linguistics and on the Brunerian view of learning. Within the discipline of linguistics the planning team adopted the view that assumes that a speaker of a language has constructed a powerful theory of that language which, without his awareness of how it works or even that it exists, enables him to generate and understand an infinite number of sentences in his language. Such creativity presupposes that the theory must employ rules of great abstractness and generality. Since children seem to construct such a theory for whatever language community they happen to be born into in much the same manner and rate, it must be concluded that the capacity for this kind of theory construction is innate to the human species.

By the Brunerian view of learning is meant the assumption that each discipline is based on "organizing ideas" (such as bond in chemistry, set in mathematics, and abstract grammatical rules in linguistics). These ideas permeate the discipline: the beginner grasps them at a low level of generality in particular cases, while the practitioner sees them as the structuring principles of the discipline. The curriculum thus addresses itself to the fundamental ideas of the discipline and deals with the questions that engage the practitioners.

The primary goal of the Language Systems Program is not to make the student into a practitioner, but rather to have him learn something about himself. Hopefully the student will take pride in the realization that he has constructed a highly sophisticated theory of English, he will gain some insight into the linguistic and psychological properties that his theory of English must have, and he will consider what these properties imply about his personal and social life.

The second goal of the curriculum is to give the student factual information about language in general and English in particular which can make some claim to humanistic value. The third goal is to give the student some understanding of the discipline as the practitioners see it: its organization, theory of science and actual practices. The fourth goal is to affect language skills. This goal is placed last, not because skills are unimportant, but because claims to shaping linguistic behavior in any measurable way through study about language must be made with caution.

These general goals break down into more specific goals for each division of the curriculum. The specific goals of each of the courses and units in the curriculum are of several different kinds and at several levels of abstraction. Cognitive, linguistic, and behavioral goals are explicitly stated for each unit.

B. A Rationale for the Language Systems Program

Many justifications have been advanced for the study of language: 1) it leads to improved speech and writing; 2) it imposes the mental training necessary for other studies in the arts and sciences; 3) it provides an attractive introduction to the study of mathematically related rule-governed systems; 4) it provides the most useful guide to the history of the speakers of that language.

Important as these claims are, they are largely unsubstantiated; there is little research evidence to support even the most widely accepted and unquestioned of the claims, that knowledge about language improves performance in language.

The Language Systems Program advances a fresh and more obvious justification for the teaching of language which can be defended (and must be defended) on purely humanistic grounds: The study of language is the study of that capability unique to man. The study of this capability offers the most promise of insights into the psychological and sociological nature and functions of the mind of man.

This claim, like the others, is also at present unsubstantiated. However, the study of language justified on humanistic grounds offers some relevant and promising links with larger social and cultural themes and concerns. It also suggests strongly that part of the curriculum presently labeled as humanistic studies can be presented as outgrowths of studies of communication, of literature, and of language systems. For example, the elementary unit on Advertising might serve as an introduction to the consideration of percepts and concepts -- our senses and our beliefs. This might be expanded and related to other thematic topics, such as belief structures, competing sensory information, the semantics of color and music, and so on. Or the unit on Symbol Systems might be studied in the larger thematic context of universals and universal variations, and related also to such other topics as kinship, hunting, courting and mating.

If utilitarian ends take precedence over humanistic ends, the program still can be justified on the basis of practice it affords in linguistic skills, language arts skills, and inquiry skills. All the units in the Perspectives in Communication program bear on the questions, topics, and approaches that continue to engage professional students of language and communication -- such questions as: To what extent are communication behaviors inherited, and to what extent learned? To what extent do communication systems change over time? To what extent does a communication system consist of original messages and to what extent is it a stock of repeated messages?

The lesson materials of the elementary units provide endless opportunities for the refinement of language arts skills learned earlier. For example, the student listens to and transcribes sounds in the Animal Communication, International Languages, and Sounds units; he practices the principles of spelling in the units Background of English, International Languages, and Writing Systems; he decodes and reads in Secret Codes and Symbol Systems units; and in all the units he writes technical reports of various kinds.

Still another important area of skills developed in the program is in inquiry approaches. Observing, classifying, measuring, comparing, using notational systems, hypothesizing and predicting, inferring, framing productive questions, experimenting -- these are basic processes in discovering and developing knowledge practiced in all the units.

C. General Approach

The subject matter of the curriculum is presented as a series of tasks, moving in a continuum from more tangible and structured to less tangible and structured. Generally speaking, each unit and the activities within units move from the concrete to the abstract, from structured to open-ended, from basic to optional activities. Class organization for these activities move from whole class to small groups to individuals. The assumption underlying this approach is that unless the student becomes actively involved in working with the data of language, the problems of the discipline and their possible solutions will be meaningless to him.

The units, each about three weeks' duration, follow a basic pattern. A dialogue (usually taped and accompanied by visuals) introduces the key questions that guide the activities of the unit. Next a problem studied by the whole class provides a model of research -- it introduces the student to the general approaches and procedures useful in similar investigations. And finally the student, either in small groups or individually, selects a problem for study, carries out his tasks, and shares his findings with his classmates.

The tasks are designed to accommodate a wide range of student ability and interest. Even the functional non-reader can be engaged at whatever level of sophistication he can muster. Each task contains a gradation of activities so that even the poorest student will be able to produce something. There is a great variety of student products: reports -- formal and informal, oral and written -- projects such as the construction of graphs, tables, charts and the collection of clippings and articles, and many different kinds of language games. The tasks, not the teacher, are designed to carry the primary instructional responsibility. The teacher's role is that of resource person, evaluator, discussion leader, trouble shooter, and general back-up, as well as co-inquirer with the students into interesting language problems.

D. Materials of the Curriculum

The materials of the curriculum are packaged into more or less self-contained modules, or units, each built around a central problem. Each unit has a kit box which holds everything necessary to teach it: the teacher's manual, which presents the unit in detail; the student handbook, which contains the general textual material the students will use during the course; the activity book, which includes exercises, puzzles, writing tasks, and suggestions for creative activities; games (which bear a major part of the actual instruction of the unit); a classroom research library containing single or multiple copies of trade books related to the subject;

reference texts, specially prepared abridgements of technical articles, and anthologies of materials such as poems, cartoons, maps, charts, and original technical articles; sundry audio-visual materials such as bulletin board displays, tapes, slides, records, film loops, and filmstrips; and evaluation materials. A limited number of equipment items is also part of the package.

E. Organization of the Curriculum

The Language Systems curriculum comprises three programs: elementary, intermediate, and high school. Development of the latter two has been deferred, but an outline description is presented here to give a picture of the total design.

In a general way the distinction between the programs might be characterized as the three stages of mental growth in Whitehead's The Aims of Education. The elementary program, Perspectives in Communication, covering grades 4-6, is the stage of romance of the discipline: it deals with topics that are not normally considered central to linguistics, but which involve language in a way that is interesting to children. All of the topics bear essentially on the question: What are the key characteristics of language, and what are the important distinctions between language and other forms of communication? As the title implies, the fifteen units of this program are designed to give the elementary student "perspectives" on different communication modes and to provide a stimulating entry in the more formal study of language.

The intermediate program, Perspectives in Language, is the stage of precision. In this program the student encounters the central problems and concerns of the discipline of linguistics. The first level of the intermediate program connects the history of the language with the forces and processes that are now affecting the student's own language. The second level brings out the student's intuitive knowledge of the theory of English by having him work out the restraints that occur in word construction and simple sentence construction. The final level approaches the student's theory of English by exploiting the rules which allow sentences to be endlessly expanded. It concludes with a consideration of the innateness and universality of these rules. Twelve units to be covered in three semesters of the intermediate years have been planned; two have been tested.

The high school program, Perspectives in Culture, represents the stage of generalization. In this program the student will be concerned with those areas of linguistics which lap over into other disciplines, such as psychology, anthropology, sociology, mathematics, and literature. Present thinking is that this program will be developed as a series of research-oriented non-sequential semester courses, two of which the student would elect during his high school years.

The Language Systems Program design is shown in outline on the following page:

DESIGN OF LANGUAGE SYSTEMS PROGRAM

Grades 4-12

ELEMENTARY PROGRAM 4-6
PERSPECTIVES IN COMMUNICATION
Non-Sequential 3-Week Study Units

- Advertising
- Animal Communication
- Background of English
- Dialects
- Gestures
- International Languages
- Names
- Popular Songs
- Propaganda
- Secret Codes
- Sign Language
- Social Uses of Language
- Sounds
- Symbol Systems
- Writing Systems

INTERMEDIATE PROGRAM 7-9
PERSPECTIVES IN LANGUAGE
(Tentative) Sequential 4-Week Study Units

7th Grade	8th Grade	9th Grade
Language Families	Words	Creativity
Historical Development & Vocabulary	Syntax	Abstractness
Phonology	Transformations	Children's Language
Semantics	Pidgin	Exotic & Artificial Language

SENIOR HIGH PROGRAM 10-12
PERSPECTIVES IN LANGUAGE AND CULTURE
(Tentative) Non-Sequential Elective Semester Units

- Language and Anthropology
- Language and Literature
- Language and Mathematics
- Language and Philosophy
- Language and Psychology
- Language and Sociology

F. Evaluation Design

The studies conducted on the Language Systems subprogram up to and including the 1970-71 school year can be considered as progress evaluations. The primary purpose of the studies was to provide project planners with feedback for program modifications and revisions.

The major emphases during the 1970-71 school year were concentrated on data obtained through four measuring instruments: a teacher questionnaire on the effects of the total program, individual unit evaluation questionnaires completed by classroom teachers upon using the different units, Preview-Review tests completed by students using the various Systems units, and an HEP developed "Neptunian" test administered to sample HEP and non-HEP fourth graders.

Eleven different units in the Systems subprogram were installed in the Field and Pilot schools. Units were rotated each month from class to class within each school, and from school to school. The unit kits each had a Preview (pretest) instrument which was administered before participating in the Unit. A review test was administered at the end of the unit to measure achievement gain.

Each unit kit also contained a unit evaluation questionnaire which was to be completed by the classroom teacher at the completion of the unit.

The "Neptunian" test was administered to a sample of Field and Pilot HEP fourth graders, and to a sample non-HEP grade four pupils at the end of the school year. Scores were used to compare students' knowledge about languages and their understanding of the linquistics discipline.

The teacher questionnaire was administered to all HEP teachers in Field and Pilot schools who used the Systems program. The objective of the survey was to obtain attitudinal data from those teaching the various units.

The results of these studies are discussed in the sections following.

G. Findings

1. Teacher Questionnaire

At the end of the school year (1970-71), classroom teachers in Field and Pilot schools were asked to complete a teacher questionnaire to obtain their reactions and attitudes about the Language Systems subprogram. Twenty-eight out of 34 classroom teachers returned the questionnaire. This represented a rate of return of about 82%.

Personal data completed by the teachers revealed that an overwhelming majority (over 93%) of teachers completed professional training requirements equivalent to five years of schooling (Bachelor's degree plus graduate degrees and/or credits). Five teachers had earned thirty or more university, or equivalent, credits beyond the master's degree; one had a Professional Teaching Certificate plus thirty additional credits; three had master's degrees; and twenty had Professional

Teaching Certificates. Two teachers had bachelors' degrees. The average number of years in teaching experience was 11.7 years, with a range from one year of experience to over 29 years.

Of the 28 teachers returning the questionniares, seven (25%)taught in the 4th grade, ten (36%) in the 5th grade, and seven (25%) in the 6th. Two other teachers also taught fourth, fifth, and sixth grade classes during the school day, while two taught fifth and sixth graders.

Based on their year's experience with the various learning units in the Systems subprogram, teachers were asked to indicate whether they would like to use the same units they had taught (after revisions) the following school year. Over 82% of the 28 teachers indicated that they would. Only two teachers indicated otherwise, while three teachers indicated they would like to work with only some of the units. Thirty-three percent of the teachers indicated they would like to teach all of the units they had taught during the 1970-71 school year, while 67% indicated they would teach only some of them. Table 82 represents the results.

Table 82. Teacher Reactions to Language Systems Units Taught During 1970-71

		Frequency of Teacher Reaction					
		Grade 4	Grade 5	Grade 6	Grades 4-6	Grades 5-6	Total
Would you like to teach the same units the following school year?	Yes	6	9	6	1	1	23
	No	1		1			2
	Some	1	1			1	3
What units would you teach again?	All of them	2	5	1		1	9
	Some	5	5	6	1	1	18

In a related question, teachers were asked to list the units they would like to use again. Of the eleven units taught during the school year, only the Propaganda and Names units were not listed as indicated preferences. It should be noted, however, that they were two of the three units that were being field-tested for the first time and that only two teachers had taught the former and only one had used the latter. Table 83 lists the frequency of units used during the school year and the number of classroom teachers who wanted to use the units the following school year.

Table 83. Classroom Teacher Preferences for Using Units Taught During 1970-71

Units	No. of Times Units Were Taught	Frequency of Classroom Teacher Preferences						Total Percentages
		Grade 4	Grade 5	Grade 6	Grades 4-6	Grades 5-6	Total	
Advertising	17	2	4	2	1	1	10	58.8
Dialects	15	2	6	3		1	12	80.0
Animal Communications	14	3	3	3		1	10	71.4
Sign Language	14	3	1		1		5	35.7
Symbols Systems	13	1	2	1	1	1	6	46.1
International Languages	11	1	2	3		2	8	72.7
Social Uses of Language	11	1	3	3			7	63.6
Sounds	11	3	1	1	1	1	7	63.6
Propaganda*	2						0	0.0
Names*	1						0	0.0
Popular Songs*	1	1					1	100.0

*These three units were being field-tested for the first time, while the others were in their second year of field-testing.

The foregoing findings reveal that aside from the Popular Songs unit, where the one teacher who taught it preferred to teach it again, the Dialects unit was preferred most by teachers. Eighty percent of the 15 teachers who used the unit indicated that they would like to teach the unit again. International Languages, Animal Communications, Social Uses of Language and Sounds were the next four most preferred units. Although the Advertising unit was taught the most often (17 times), only about 59% of the teachers preferred to use it the following school year.

When asked to rate the units on a four-point scale to indicate the degree of appropriateness for each grade level, the Sounds units appeared to be most appropriate for all grade levels. Ninety percent of the ten teachers gave the unit the first two highest ratings on the four-point rating scale. By way of contrast, the unit on Sign Languages seemed to be the least appropriate for any grade level. Sixty-four percent of the teachers gave the unit the last two ratings on the four-point scale.

By grade levels, the Advertising, Sounds, and Animal Communications units appeared to be the most appropriate for fourth graders, as indicated by classroom teacher ratings. Least appropriate appeared to be the International Languages and Dialects units. For fifth graders, the two most appropriate units appeared to be the Social Uses of Language and Symbols Systems units. Least appropriate seemed to be Sign Languages. The International Languages, Dialects, Sounds, and Animal Communications units appeared to be the most appropriate for sixth graders in teachers' opinion. The units noted as being the least appropriate for sixth graders appeared to be the Symbols Systems, Sign Languages, and Advertising units. Table 84 reports the findings.

Table 84. Teacher Ratings of Units Taught

	Grade and Frequency of Ratings*																			
	Grade 4				Grade 5				Grade 6				Grades 5-6				Ratings of All Teachers Combined			
Unit Taught	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Popular Music	1																1			
Propaganda			1				1												2	
Advertising	3	2			2	1	1	2		2	2	1				1	5	5	3	4
International Languages			3			2			3	1				1	1		3	4	4	
Dialects		1	1	1	4		3		2	1	1				1		6	2	6	1
Sounds	2	1			1				3	1	1			1			6	3	1	
Sign Languages	1	1	1	1		2	1	2		1		3				1	1	4	2	7
Animal Communications	2	2		1		2	2		2	1	1		1				5	5	3	1
Social Uses of Language	1		1	1	1	2		1	1	1	1					1	3	3	2	3
Symbols Systems		2		1	2	1		1	1		1	3	1				4	3	1	5
Names						1												1		

*Ratings were based on a four-point scale, ranging from 1 ("most appropriate") to 4 ("least appropriate").

The majority of teachers did not feel that the sequence of units taught made a difference in terms of effectiveness for learning. Only nine of the 28 teachers (32.1%) indicated that the sequence of the particular units they had taught should have been different, when asked this question. The results thus confirms, to some extent, the program's organizational format of presenting non-sequential units. However, the relatively high percentage of teachers who felt that the sequence of units used was an important factor in learning effectiveness require that some review of individual units be conducted regarding this problem.

When asked to confirm the planners' assumption that the succeeding units taught would be easier because of the teachers' and students' experiences with previous units used, one-half of the classroom teachers indicated that it was easier with succeeding units. Slightly more than one-fourth felt that it was about the same for each unit regardless of past experiences with other units, while four teachers felt that it depended on the unit and the children involved. Only one teacher indicated that it was harder.

In another question it was determined that only eight of the teachers (29%) had taught a unit more than once. Of these eight, one was a fourth grade teacher, four were fifth grade teachers, and three were sixth grade teachers. All but the fourth grade teacher indicated that they had made some adaptation to the suggested lesson plans to fit their particular situations. The predominant reason for the adaptations was the difficulty of the suggested activities for students.

When asked to share the techniques used for reporting pupil progress for the Language Systems subprogram, most of the teachers indicated that they had used the parent-teacher conference method. Various anecdotal and grading systems were employed by teachers. Among these were comments on strengths and weaknesses, number of assigned units completed, various grading symbols for academic and social growth, and the use of the student newspaper for discussing the dimensions of the program. The only suggestion offered was for planners to develop a checklist indicating pupil progress.

In the final item on the questionnnaire, teachers were asked to list recommendations for improving teacher preparation in working with the Systems subprogram. The most consistent response was the need for more indepth content preparation and background for the Systems program. Teacher responses are listed below.

Responses	Frequency of Response*
Content background of unit	10
Overview; desired outcomes of unit	6
More time to review unit lesson plans	6
Suggestions for organizing classroom activities	2
Year-round in-service training and discussions with planners	2
Better Teachers Manual	2
On-site resource teachers	2
Answer key for each unit	2
Feedback by planners	1
Better unit evaluation forms	1
Training for using equipment	1
Revision of units for less capable pupils	1

The foregoing data clearly suggest a need for more preparation and training for teachers using the Systems units. The combination of inadequate content background and the limited time available for review of the unit plans appeared to be the most consistent concerns expressed by classroom teachers.

2. Pupil Performances

This evaluation study was conducted primarily to provide planners with information feedback for revising or modifying the various units in the Language Systems program. A second purpose was to compare the achievement of HEP and non-HEP pupils with respect to their knowledge about language and their understanding of the discipline of linguistics.

It will be noted that two of the major goals of the Language Systems program are (1) to give the pupil some understanding of the study of language with regard to linguistic organization, theory of science, and actual practices, and (2) to give the pupil practice in inquiry procedures.

The sample for the present study consisted of 615 fourth graders, 492 from HEP schools and 123 from non-HEP schools.** Of the seven HEP schools, only one (Koloa) was considered to have a student population with a rural background. The others, together with the control school, were regarded as urban schools. Apart from achievement measures, data on pupils' ability and socio-economic background were also collected. Instruments used in the study comprised the Preview-Review Exercises, the Neptunian Test, the School and College Ability Test (SCAT), the Sequential Test of Educational Progress (STEP) Reading Test, and Socio-Economic Status (SES), as measured by Hollingshead's Two Factor Scale. The Neptunian test was administered to the HEP and non-HEP pupils at the end of the 1970-71 school year. Data on the other measures were gathered throughout the school year.

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* Teachers listed more than one response.

** These schools were: Kalihi-Uka, Puohala, Palisades, Waiakeawaena, Kahului, Koloa, Wilcox, and Waialae (non-HEP). These seven HEP schools were the only ones out of the 15 schools pilot-testing the Systems program who had sufficient and complete data for analyses.

It was expected at the outset that the HEP sample pupils would have a higher SES mean score (indicating a lower socio-economic background) as compared with the control pupils. It was also expected that the general ability of the HEP pupils, as measured by the SCAT, would be lower than that of the control group. These expectations were borne out by the collected data. Table 85 shows that the SES mean score for the HEP sample was significantly ($p < .01$) higher than that for the control group. This meant, of course, that the HEP pupils as a group had a lower socio-economic background. The significant difference ($p < .01$) between the SCAT mean scores suggested that the control pupils were superior to their HEP counterparts in terms of overall aptitude for school achievement.

Table 85. Mean Scores for SES and SCAT

		HEP	Control
	N	352	123
SES	Mean	49.50	44.75
	S. D.	15.71	12.31
	N	436	122
SCAT	Mean	248.64	257.53
	S. D.	4.97	10.02

(1) Comparison between HEP and control on SES: $F = 9.27$, $p < .01$

(2) Comparisons between HEP and control on SCAT: $F = 183.13$, $p < .01$

A main source of information feedback for planners was found in the Preview-Review data collected throughout the school year. The Preview-Review Exercises were constructed in such a way as to make it possible for the tests to be scored objectively. All test items had a direct bearing on the content of the various units. The number of items in these exercises varied from test to test, ranging from six (Advertising) to 26 (International Languages). The Preview was administered before the pupils entered a unit, partly to determine their prior knowledge of the subject matter and partly to find out their level of interest in the materials covered in the unit. The Review was given upon completion of the unit, serving as a post-test, measuring achievement gain. Thus, the test data not only indicated the amount of progress made by the HEP pupils but also reflected the strengths and weaknesses of the various units in the program. Table 86 summarizes the data on eight units in the elementary division of the program.

Table 86. Mean Scores for Preview and Review Exercises

	HEP Rural Schools N = 28		HEP Urban Schools N = 464		HEP Total N = 492		% of Gain
	Preview	Review	Preview	Review	Peview	Review	
Advertising	2.76	2.87	2.74	3.49	2.74	3.44	26%
Dialects	9.60	12.17	11.18	14.24	11.06	14.09	27%
International Languages			10.19	16.09	10.19	16.09	58%
Social Uses of Language			7.70	9.36	7.69	9.36	22%
Sounds			9.50	11.98	9.50	11.98	26%
Animal Communications	10.78	10.62	10.01	13.67	10.09	13.40	33%
Sign Languages			6.68	7.89	6.67	7.89	18%
Symbols Systems	11.08	14.57	8.81	12.40	9.24	12.75	38%

It will be noted that the Review mean scores tabulated in Table 86 indicated that in all eight units the HEP pupils had performed reasonably well--responding correctly to at least one-half of the test items. The percentages of achievement gain ranged from 18% to 58%. However, if one compares the units on the magnitude of gain, it would appear that the International Languages, Symbols Systems, and Animal Communications units were more effective than the others. The Sign Languages, on the other hand, would seem to be the least effective. The relatively small achievement gain could, of course, be due to numerous factors. However, a major factor might be the difficulty level and the unfamiliar nature of the materials covered in the various units. At any rate, the test data tended to confirm classroom teachers' observations that the overall difficulty level of the materials covered in the units appeared to be too high for some of the pupils using the Language Systems program. It would therefore seem worthwhile to re-examine the units, with a view to revising or modifying the content, so as to make the materials more suited to the pupils' ability level.

The Neptunian test was constructed to measure pupils' ability to apply linguistic principles to an artificial language called Neptunian. The test consisted of six sections, with a total of 16 items. In Section One, the pupils were asked to translate Neptunian words into English by looking for clues in the examples given in the test items.

Section Two required the pupils to create Neptunian words for English words provided in the test. The pupils' performance in this part of the test was judged on the basis of (a) foreign appearance of words, (b) correct word structures, and (c) logical formation for opposites and plurals.

The pupils' task in Section Three of the test was to translate sentences from English to Neptunian and vice versa. The criteria for scoring the translation were: (a) vocabulary, (b) grammar, and (c) word order.

Section Four of the test required the pupils to list ways in which Neptunian was different from or similar to English in spelling, word-making, and sentence-making.

In Section Five, the pupils were asked to list additional words in English that they felt would be useful when translated into Neptunian. They were also asked to estimate how many Neptunian words they could make up if they had the time.

Section Six consisted of a single item, asking if the pupils would like to study the language system used by the Martians.

It thus appeared that the Neptunian test covered a wide range of linguistic principles and their applications. It follows that it would seem reasonable to regard the Neptunian test scores as a valid indication of pupils knowledge about languages and their understanding of the discipline of linguistics. The Neptunian total score (excluding the attitudinal item in section six) was subsequently used as a measure of pupils' end-of-year achievement. It was also used as a basis for comparing the various subgroups involved in the study.

First and foremost, the total HEP and control samples were compared on their performance on the Neptunian Test. Data tabulated in Table 87 showed that the HEP pupils scored higher than their control conterparts. The difference was, however, not statistically significant ($p < .05$).

Table 87. Mean Scores for the Neptunian Test

Sample	N	Mean	S. D.
HEP Low STEP group*	146	19.10	10.57
HEP Medium STEP group	141	28.91	10.75
HEP High STEP group	137	36.15	8.95
HEP Rural	24	14.33	9.36
HEP Urban	468	28.18	12.54
HEP Total	492	27.51	12.75
Control	121	25.81	12.92

(1) Comparison among STEP subgroups: $F = 101.03$, $p < .01$
(2) Comparison between HEP rural and HEP urban: $F = 28.46$, $p < .01$
(3) Comparison between HEP total and control: $F = 1.71$, $p > .05$

* The low group consisted of pupils whose STEP reading scores were at least one-half a standard deviation below the sample group mean. The high group comprised pupils whose STEP reading scores were at least one-half a standard deviation above the mean. The rest of the pupils were in the medium group. For the sample group, the mean and standard deviation for STEP reading were 243.57 and 13.64 respectively.

While this would appear to mean that the exposure of HEP pupils to the Language Systems program did not produce higher achievement as measured by the Neptunian Test, it is suggested that the data should be viewed in the light of the differences in pupils' background. It will be recalled that the HEP pupils had a significantly higher SES mean score, indicating a lower socio-economic background, as compared with the control pupils. It was also shown earlier that the HEP pupils scored significantly lower on the SCAT than their control counterparts, meaning that they had a lower overall aptitude for school achievement. Despite these differences, the HEP pupils were able to perform as well as the control pupils; in actuality scoring slightly higher than control pupils on the Neptunian Test. In all fairness, the strength of the Language Systems program should be viewed in this total context.

Inasmuch as pupils' socio-economic background and general ability appear to be important factors affecting school achievement, it was felt that the present study should examine the achievement of HEP pupils in relation to these factors. In an effort to do this, HEP pupils were divided into various subgroups. First, the HEP schools were divided into rural and urban schools, depending on the locale of the schools. Second, the HEP pupils were divided into high, medium, and low reading ability subgroups on the basis of their STEP reading scores. The Neptunian mean scores for corresponding subgroups were compared to determine the relative achievement of the subgroups.

When pupils from the rural school (only one school was considered as being rural) were compared with pupils from the urban schools, a substantial difference was found between the two groups. In actuality, the Neptunian mean score for the rural pupils was only one-half of what the urban pupils obtained. As would be expected, the difference turned out to be highly significant ($p < .01$). It thus appeared that exposure to urban experiences, coupled with the influence of such media as television and movies, had a lot to do with pupils' knowledge about language. It might also be pointed out in this connection that the Review mean scores for rural pupils were generally lower than the mean scores for urban pupils.

The analysis of data pertaining to the reading ability groupings revealed a very conspicuous trend with respect to the achievement of low, medium and high groups: the higher the STEP score, the better the achievement. As shown in Table 87, the differences among the three ability groups turned out to be highly significant ($p < .01$). The significant differences were, however, not unexpected. Both the STEP Reading Test and the Neptunian Test are to a great extent, measures of verbal ability. The correlation between the two tests was, in fact, computed to be .57 ($p < .01$). While this correlation might seem high at first sight, it indicated that only approximately one-third (32%) of the variance in the Neptunian test could be accounted for by the STEP Reading Test, or vice versa. This left the major part of the variance (68%) unexplained. The unexplained variance, or the major part of it, must be considered as unique to the Neptunian test, suggesting that the test was measuring abilities other than comprehension.

In summary, the results of the present study seem to support the following conclusions:

1) No significant difference was found between HEP pupils using the Language Systems program and control pupils with respect to achievement, as measured by the Neptunian test. This finding should, however, be viewed in relation to the fact that the HEP pupils were shown to have lower socio-economic backgrounds as well as lower aptitude for school achievement, as compared with the control pupils. It should also be noted that the non-significant difference in achievement was actually in favor of the HEP pupils.

2) There was some indication that , as compared with a rural setting, exposure to urban experiences with the paraphernalia of mass media was more conducive to the development of linguistic abilities, as represented by the Neptunian test.

3) Within the HEP sample, pupils of a higher reading ability level performed better on the Neptunian test than pupils of a lower reading ability level.

4) The correlation between the Neptunian test and the STEP suggests that while both measures comprised a verbal factor, the major part of the Neptunian test was unique in itself and measured abilities other than ordinary reading comprehension.

5) While the Preview-Review data indicated positive progress, the achievement gains of the HEP pupils in many of the units were admittedly low. This finding tended to confirm teachers' observation that a portion of the materials covered in the program was too difficult for the average HEP pupil.

6) In view of the evidence of high difficulty level of some of the units in the Language Systems program, it would seem valuable to re-examine the units with a view to revising and/or modifying the content, so as to make it more suited to pupils' ability level.

3. Individual Unit Evaluation Reports

One of the techniques used to provide project planners with feedback data for program changes was to ask teachers to complete a questionnaire after each unit was taught. Each unit kit in the Systems subprogram used at Field and Pilot schools during 1970-71 contained a planner-developed questionnaire for evaluating the unit. Teachers were asked to submit the completed questionnaire to program planners after teaching the unit.

The rate of return of the questionnaire for the eleven units taught was over 50% for nine of the units. No unit questionnaire were returned for the Names and Propaganda units. In addition, only one teacher used the Popular Songs unit. Analyses of the data, therefore, were made only for the other eight units.

In the unit evaluation questionnaire, the planners asked respondents to give one of four responses to three related items on the objectives and appropriateness of the unit. Categories for responding included: "yes", "pretty much", "so-so", and "no". Because it was difficult to discern the teachers' feelings on the two middle categories (pretty much and so-so), they were combined into one category--"some". All responses for the "pretty much" and "so-so" categories, therefore, were tabulated as "some".

a. Advertisint Unit

Fourteen of the seventeen teachers (82%) who taught this unit returned questionnaires to planners. Of this total, three teachers taught fourth graders, five taught fifth graders, four taught sixth graders, and two taught a combined fifth and sixth grade class.

The initial items on the unit questionnaires asked for teacher opinions on the objectives and appropriateness of the unit. Table 88 reports the tabulations.

Table 88. Teacher Responses To Objectives and Appropriateness of Unit

	Yes	Some	No
Were the objectives clear?	8	6	
If clear, were you able to meet them?	2	10	2
Was the unit appropriate as to difficulty for your class' ability?	3	9	2

The results shown above indicate that classroom teachers felt that the objectives for the unit were clearly stated in most instances. Meeting them, however, presented some problems as only two teachers clearly indicated that they were able to meet the unit objectives, while ten others indicated that they were only able to meet some of them. Two teachers indicated that they were not able to meet the objectives at all.

The appropriateness of the unit for the ability levels of the classes was also a concern to most teachers. Only three teachers (21%) felt that the unit was appropriate for their students' ability level, while the responses by the others revealed that most of them encountered some difficulty in meeting the needs of students in their classrooms.

In two related items, teachers indicated the four most and least successful activities conducted in class. Appendix 28 reports the tabulations.

The data in Appendix 28 show that among the most successful were the games, writing commercials, and alliteration activities, while least successful were fold-a-rama, classifying ads, and making up names for products. The most consistent reason for the difficulty, as reported by teachers, appeared to be in difficulty students had with the requirements for the activities.

Opinion was equally divided as to whether the time suggested for completing the unit (3-4 weeks) was adequate. Seven teachers felt that the time was adequate, while seven others indicated otherwise. The latter data was supported by teachers with comments indicating that completing the unit was difficult because of the difficulty level of activities, particularly for fourth graders and low ability children.

Teachers were also asked to provide feedback on the contents in the Teachers' Manual. Appendix 29 lists the areas considered most helpful to teachers and also the least useful. The data reveal that teachers, without adequate training and background for that unit, depended heavily on the suggested activities and daily lesson plans. Listed most often were suggestions that helped teachers with the instructional aspects of the unit. None of the least useful areas listed were of major prominence.

When asked to list the materials in the unit kit that were most useful and also the least supportive, the teachers responded by listing the following (Table 89):

Table 89. Classroom Teacher Opinions on the Materials in the Unit Kit

Materials	Frequencies Most Useful	Least Supportive
Slides	7	
Card Games	6	
Tapes	6	2
Ad Book	4	
Film	4	2
Books (including dialogue book)	3	2
Teachers' Manual	1	
Puzzles	1	
Bartletts Familiar Quotations	1	2
Filmstrip	1	
Scrapbook of Early Advertising		3
All	1	
No response		6

The responses, as indicated in the foregoing table, suggest that most of the materials distributed in the unit kit helped teachers with their classroom instruction.

In the final item of the unit evaluation questionnaire, teachers were asked to list the materials that were most prone to technical problems. Following is a list of responses given:

Materials	Frequency of Response
Tapes	5
Films	4
Durability of Workbook	2
Packaging of games (inadequate labeling procedures caused parts of games to be mixed with other games)	2
Tape recorder	1
No response	5

The two most frequently listed materials (tapes and films) were related to vendor production problems (audio quality). On the other hand, the comparatively low frequency of least supportive items and the fact that five teachers failed to respond suggested that technical problems related to the materials in the Advertising unit were minimal.

b. Animal Communications Unit

Twelve of a total of 14 teachers (86%) returned the unit evaluation questionnaires on Animal Communications. Two teachers were from the fourth grade, seven from the fifth grade, one from the sixth, and two with fifth and sixth graders combined.

When asked to indicate their opinions on the objectives and appropriateness of the unit for their students, the teachers responded that the objectives were basically clearly stated. Seven teachers (58%) felt that the objectives were very clear, while the others felt that the objectives were somewhat well-stated.

When asked to indicate whether they were able to meet the objectives, 25% of the respondents indicated that they did and 75% stated that they were able to meet some of the objectives.

In a related item, teachers indicated whether the unit was appropriate as to difficulty for the ability levels of the class. One teacher indicated that it was and more than 66% indicated that some parts of the unit activities were appropriate. However, one-fourth of the teachers indicated that the unit was not appropriate for their pupils' ability level. Table 90 reports the data.

Table 90. Teacher Responses to Objectives & Appropriateness of the Unit

	Yes	Some	No
1. Were the objective clear	7	5	
2. If clear, were you able to meet them?	3	9	
3. Was the unit appropriate as to difficulty for the class' ability?	1	8	3

Two related items asked teachers to list the four most successful activities conducted with the unit. Appendix 84 reports the data regarding these two questions.

The tabulations in Appendix 30 reveal that the most successful activities were related to games and other fun-type activities. The least successful were activities associated with technical production problems of the software (e.g. poor audio quality of tapes). In addition, a fairly consistent comment made by teachers, in relation to the least successful activities, was the difficulty level of the activity requirements.

The responses to the next item on the unit questionnaire were consistent with the responses for other units. That is, the majority of teachers felt that the suggested time allotment of 3-4 weeks to complete the unit was insufficient. Only two of the twelve teachers indicated that the time allotment was adequate. The primary concern described by teachers was that the low ability students needed more time to work on activities.

Two items relating to the usefulness of the Teachers' Manual revealed a consistent pattern with responses for the items from other units. Teachers depended heavily on the manual for suggestions on conducting lesson activities. The respondents felt that the most useful parts of the Teachers' Manual were the suggested lesson plans and descriptions on how to conduct activities. No significant pattern developed from the responses on the least useful areas of the manual. Appendix 31 reports the findings.

The responses to two related items were also consistent with the responses from other units. Classroom teachers generally were of the opinion that the materials distributed in the unit kit were useful for their instructional lessons. The basic complaint against the materials was the difficulty level of the requirements developed for the software. Table 91 reports the responses of teachers to materials in the unit kit.

Table 91. Classroom Teacher opinions on the Materials in the Unit Kit

Materials	Frequencies	
	Most Useful	Least Supportive
Tapes	5	3
Film	4	
Books	4	
Games	3	2
Research Cards	1	
Film Loop	1	1
Everything	2	
Duck Calls (whistle)		1
Poster		1
Anthologies		3
Schneider's Enjoy Your Puppy & Enjoy Your Mynah		1
Hereford's A Child's Primer of History & More Animals		1

For the final item on the unit questionnaire, teachers listed the resource materials that created the most technical problems. Following is a list of the responses given.

Material	Frequency of Response
Tapes	6
Quality of Materials (defects)	5
Filmloop	4
Tape recorder	1
Directions for games	1
Film	1
Slides	1

Responses shown above are consistent with those given for other units. That is, the quality in production of software items (e.g. poor audio quality of tapes) created the most problems for classroom utilization.

c. Sign Language Unit

Eleven of the fourteen teachers (79%) using the Sign Languages unit returned evaluation questionnaires. Of the total, four were from fourth grade teachers, six from fifth grade teachers, and two from sixth grade teachers.

To the question of whether the objectives were clearly stated, about 45% of the respondents indicated that they were. Similarly 45% of the teachers reported that the objectives were somewhat clear. One teacher flatly felt that the objections were not clearly stated.

All of the respondents indicated that they were not able to meet all of the objectives entirely. However, over two-thirds felt that some of the objectives were met. Two teachers reported that they were not able to meet the unit objectives at all and one teacher failed to respond to the item.

With regard to the appropriateness of the unit (in terms of difficulty for students), only one teacher felt that the unit was developed for her students' ability levels. About 64% of the teachers felt that some of the suggested activities in the unit were appropriate, while three teachers indicated that the unit was not geared for the ability levels of their students at all.

The foregoing findings are consistent with the results to these items from other units. Most of the teachers felt that the objectives for the various units were clearly stated. However, meeting the objectives was a source of frustration for teachers. Furthermore, the majority of teachers were in the opinion that the units were not appropriate for the ability levels of students in the class. In most instances, the feeling among teachers was that the units were not designed for the low ability children.

Table 92 reports the findings related to the three items.

Table 92. Teacher Responses to Objectives & Appropriateness of the Unit

	Yes	Some	No	No Response
1. Were the objectives clear?	5	5	1	
2. If clear, were you able to meet them?		8	2	1
3. Was the unit appropriate as to difficulty for the class' ability?	1	7	3	

When asked to list the activities that were the most and the least successful, classroom teachers listed a wide range of activities that proved to be successful in the classroom. Furthermore, the minimal number of least successful activities listed by teachers suggests that most of the suggested activities were well-designed and appropriate for classroom utilization. The responses were also consistent with responses given for the items in other unit questionnaires. That is, the most frequently listed activities were those that were activity-centered. The most consistent comments reported by teachers with regard to the least successful activities related to the difficulty children had with the requirements of various activities, and the lack of adequate time for conducting the lessons for the "slower" children. Appendix 32 lists the responses in detail.

The generalizations reported above support the responses given by teachers to another item in the unit questionnaire. Over 63% of the respondents reported that the time allotment for completing the unit (3-4 weeks) was inadequate. Only one teacher stated that the duration of time was satisfactory. Another teacher failed to respond to the item. Again the most consistent comments reported were related to the lack of time for completing the units because of the difficulty low ability children had with the unit requirements.

The pattern of responses for the next two items on the unit questionnaire was also consistent with findings from other units. Teachers felt that the most helpful aspects of the Teachers' Manual were those related to suggestions for conducting lesson activities. The least useful areas in the manual related primarily to program development oversight in not including helpful guidelines for better utilization of the manual. The responses further suggest a strong need felt by teachers for more training and background in subject area content. Appendix 33 reports the findings.

The responses to two related items further reveal a consistent trend with responses in other unit evaluation reports. That is, most of the materials included in the unit kit were useful for classroom utilization. The responses as to the usefulness of the materials included in the unit kits are shown in the table on the following page.

The responses related to the materials creating the most technical difficulties revealed no significant trend. Remarks, instead, included pleas for more resource materials and equipment. Six teachers also did not respond to the item, indicating perhaps that no problems of major consequences were encountered with the materials and equipment.

Table 93. Classroom Teacher Opinions on the Materials in the Unit Kits

Materials	Frequencies	
	Most Useful	Least Supportive
Resource book	6	
Tapes	3	1
Film Loops	3	
Card Games	3	1
Film	2	
Handbook	2	
Signs Game	1	
No Response	1	8

d. International Languages Unit

The rate of return by classroom teachers on the International Languages unit questionnaire was 54%, from a total of eleven teachers. Of the total, one teacher had used the unit on fourth graders, one on fifth graders, and one on the sixth graders. Three teachers did not identify the grade levels taught.

Asked whether the unit objectives were clearly stated, the majority of teachers responded affirmatively. Three teachers reported that the objectives were clearly stated and three indicated that some of the objectives were clear. Teachers, however, had some difficulty in meeting all of the stated objectives, whereas three indicated they met some of them. Another teacher clearly stated that she was not able to meet the objectives at all.

In a related item, teachers were asked to indicate whether they felt the unit was appropriate for the difficulty level of the pupils. The responses were identical to the ones reported above.

The foregoing findings are again consistent with the pattern established by responses for other units. In general, most teachers felt that the objectives for the units were stated clearly enough but they encountered difficulties in attempting to meet all of them. The divergent ability levels of the various groups of students who were exposed to the Systems units also created difficulties for teachers and pupils alike. In most instances, teachers felt that the units did not meet the needs of specific ability level subgroups.

In response to two related questionnaire items, teachers listed a wide variety of activities which they felt were most successful. However, a wide range of other activities were also reported to be least successful. The wide disparities between the activities listed suggest that classroom teachers had difficulties with certain aspects within the unit. No pattern was established favoring a particular group of activities. A detailed listing of teachers' responses is shown in Appendix 34.

Responses to the next item on the unit questionnaire were consistent with results from other units. Most teachers felt that the time element for conducting the units was inadequate. Only one teacher felt that the time allotted was somewhat adequate. Five teachers felt otherwise.

The opinions of teachers on the manual were also consistent with results from other units. Teachers generally felt that the suggestions presented in the manual for conducting daily lessons were most helpful, while the least supportive were comments relating to specific omissions which would have made utilization of the manual more convenient. Overall, the responses suggest a need for more orientation to unit content areas. Appendix 35 reports the responses.

Classroom teachers generally were in the opinion that the resource materials included in the unit kits were helpful for classroom instruction. Particularly consistent were the responses for the card games and the dialogue tapes and slides. The table below reports the results.

Table 94. Classroom Teacher Opinions on the Materials in the Unit Kits

Materials	Frequencies Most Useful	Least Supportive
Dialogue tapes & slides	6	
Card games	6	
Reference materials	1	
Pronounciation key	1	
Nixon Esperanto dictionary	1	
Bonvalu Esti Mia Amiko (reference book)	1	
Dialogue books, cartoons, & jokes	1	
Research anthologies		3
Fiske games		1
Esperanto newspaper		1
B S Manual		1

The responses to the final item in the unit evaluation questionnaire were few, suggesting that technical problems associated with unit materials and equipment were minimal. Only two teachers indicated problems with the audio quality of the tapes. Two teachers also indicated some frustration with the defective quality of some of the materials.

e. Sounds Unit

The rate of return of the evaluation questionnaire for the Sounds unit was 100%. All eleven classroom teachers who used this unit returned unit-end evaluation reports. Teachers who used the Sounds unit were primarily from the sixth grade. Five of the eleven teachers used the unit for sixth graders. Additionally, two teachers taught fourth graders, one had fifth graders, and another had fifth and sixth grade students combined.

The responses to the first three items on the questionnaire reflect the reaction of teachers to the unit overall. That is, teachers were generally favorable to most aspects of the unit. Seven of the eleven teachers (63%) felt that the objectives for the unit were clearly stated and three teachers felt that some of the objectives were well-stated. One teacher failed to respond.

The majority of teachers also felt that they were able to meet all or most of the objectives of the unit. Three teachers reported that they had met all of the objectives and seven teachers (64%) indicated they had met some of the unit objectives. One teacher was non-committal.

In relation to the appropriateness of the unit, the majority of the teachers reported that the unit was appropriate in most instances. Five teachers responded that all facets of the unit were appropriate and the rest indicated that some phases of the unit were appropriate. The table below reports the data.

Table 95. Teacher Responses to Objectives and Appropriateness of the Unit

	Yes	Some	No	No Response
1. Were the objectives clear?	7	3		1
2. If clear, were you able to meet them?	3	7		1
3. Was the unit appropriate as to difficulty for the class' ability?	5	6		

The foregoing data thus reveal that in teachers' opinion, most of the unit objectives were clearly stated and were attainable in most instances. Furthermore, teachers were in the opinion that the unit was developed to meet the needs of most of their students.

The wide range of responses to the items asking teachers to list the most and the least successful activities suggest that some of the suggested activities were successful for teachers, while others were not as successful for classroom use. Comments by teachers revealed that many teachers felt that activities were successful because they were activity-oriented rather than verbally-oriented. The less successful activities, in teachers' opinion, were those which were too sophisticated and difficult for the less capable students. A detailed list of the responses is shown in Appendix 36.

When asked to indicate whether the suggested time allotment (3-4 weeks) was sufficient for completing the unit, the responses by teachers were equally divided. Five teachers felt that the time allotment was adequate, while five others felt otherwise. One teacher was non-committal.

The majority of teachers reported that the Teachers' Manual was one of the best developed by planners. Most useful to teachers were the daily lesson plans and the organizational format of the manual. Six teachers did not respond when asked to list aspects of the manual that were least useful, suggesting that the manual overall was very helpful to teachers. Appendix 37 lists the responses given by teachers.

Teacher comments to two related items on the unit questionnaire indicate that most of the resource materials included in the unit kit were quite useful for classroom instruction. The tapes were listed most frequently as being a helpful instructional tool. The responses by teachers asking for a list of the most and the least useful materials in the unit kit are shown in the table below.

Table 96. Classroom Teacher Opinions on Resource Materials in the Unit

	Frequencies	
Materials	Most Useful	Least Supportive
Tapes	7	1
Slides	3	1
Games	2	
Transparencies	2	
Reference books	2	2
Student Handbook	1	
Card games	1	

Table 96. Classroom Teacher Opinions on Resource Materials in the Unit (Continued)

Materials	Frequencies Most Useful	 Least Supportive
Record	1	
Anthologies		1
No response	1	
None		4
All	2	

Technical problems with the resource materials apparently were minimal, as indicated by teacher responses. Seven of the eleven teachers reported no problems or failed to respond to this item. Only the tapes and transparencies provided some problems. Three teachers each listed these two items. The primary problems with the transparencies were the durability of the material and the color contransts used. The problem with the tapes was consistent with responses from other unit evaluation reports. That is, the audio quality was poor.

f. Dialects Unit

Seventy-three percent of the teachers using this unit returned the evaluation questionnaire. Of the total 15 teachers, three were fourth grade teachers, four fifth grade, three sixth grade, and one was a combined fifth and sixth grade teacher.

The responses to three related items on the unit questionnaire suggest that the objectives for the Dialects unit were basically stated clearly and that most teachers were able to meet all or some of them. The majority of teachers also felt that all or most aspects of the unit were appropriate for the ability levels of their students. Table 97 reports the results.

Table 97. Teacher Responses to Objectives and Appropriateness of the Unit

	Yes	Some	No
1. Were the objectives clear?	6	5	
2. If clear, were you able to meet them?	3	8	
3. Was the unit appropriate as to difficulty for the class' ability?	4	6	1

When asked to indicate the activities that were most and least successful for instruction, the responses and comments were consistent with the general pattern established by findings from other units. The most successful activities appeared to be those that were activity-oriented and did not require academic ability constraints. Those that were least successful were activities that demanded capability in reading and research-oriented techniques. Appendix 38 presents a detailed list of the responses.

The time allotment again was unsatisfactory to teachers. That is to say, ten of the eleven respondents did not feel that the 3-4 week period was adequate for completing the unit. Only one teacher felt there was sufficient time.

Classroom teachers generally felt that the Teachers' Manual was quite helpful for instruction. The most helpful aspect in the manual was the daily lesson plans. The varied range of responses given by teachers follow the general pattern established in earlier reports on other units. Teachers seemed to lack adequate content background and therefore relied heavily on the manual. Appendix 39 lists the various aspects of the manual that were most and least useful to teachers.

The responses to two other related items on the unit questionnaire were consistent with results from other units. Teachers felt that the resource materials distributed with the unit kit were all useful for the teaching of the unit. The least useful were again those materials that required academic skills on the part of students. Table 98 below lists the responses on the most useful and least supportive resource materials distributed in the kit.

Table 98. Classroom Teacher Opinions on Resource Materials in the Unit Kit

Materials	Frequencies	
	Most Useful	Least Supportive
Tapes	7	1
Card games	6	1
Student handbook	4	
Books and comics	3	1
Workbooks	3	
ETV	2	
Resource pamphlets	1	
Research library books		4
New Guinea newspaper		1
Mexico, Her Daily and Festive Bread		1
The Thread That Runs So True		1
Tapes on pidgin stories		1

Technical problems with the resource materials appeared to be quite prevalent in the Dialects unit. These items were listed by teachers as presenting problems: Tapes (7 responses), video tapes (4 responses), and slides (3 responses). Two teachers did not respond to the item.

g. Symbols System Unit

Seven of the thirteen teachers who used this unit returned the unit evaluation questionnaire. This represented a rate of return of only 54%. Two of the teachers taught in the fourth grade, one in the fifth, two in the sixth, and one in a combined fifth and sixth grade class. One teacher did not indicate the grade level taught.

The majority of the teachers felt that the objectives of the unit were generally clear. Similarly, the majority of teachers also felt that they were able to meet all or some of the unit objectives. With regard to appropriateness of the unit for the ability levels of the class, the opinion of teachers was almost as positive. Only one teacher felt that the unit was not appropriate, while the rest felt that the unit was appropriate for all or most of their students. Table 99 below presents the responses of classroom teachers to these three items.

Table 99. Teacher Responses to Objectives and Appropriateness of the Unit

	Yes	Some	No	No Response
1. Were the objectives clear?	2	4		1
2. If clear, were you able to meet them?	1	6		
3. Was the unit appropriate as to difficulty for the class' ability?	2	4	1	

The foregoing data is generally consistent with results from other units. The unit objectives were adequately clear to most teachers but meeting all the objectives was another matter. As with most other units, teachers had some reservations about the appropriateness of the unit for some of the students--particularly low ability children.

When asked to list the most and least successful activities conducted with the unit lessons, the wide range of responses suggest once again that those related to non-academic/activity-related requirements were the most successful, whereas those that were verbally-oriented provided the most frustration for students. Appendix 40 presents a detailed listing of successful and unseccessful activities conducted by teachers.

The responses to the next item in the unit questionnaire were consistent with the findings from most of the other units. That is, the time requirement for completing the unit was almost totally usatisfactory. Five of the seven teachers reported that the 3-4 weeks time period was inadequate. Two teachers were non-committal.

The responses to the next two items on the unit questionnaire were also consistent with previous findings. Generally, the majority of teachers, without adequate training and content orientation, relied heavily on the Teachers' Manual for providing the basis for instruction. Of the five teachers who responded, each listed one aspect of the manual that was helpful for teachers: general guidelines, weekly sequences of activities, daily lesson plans, overview, and all. Two teachers did not respond to the item.

With regard to the least useful aspects of the manual, the primary concern expressed by teachers was for inclusion of more information (e.g. more details for suggested activities, answer keys, etc).

When asked to list the resource materials that were the most useful and the least supportive of the activities, the teachers' responses clearly show that an overwhelming majority of teachers felt that most of the materials were very useful. Four of the teachers responded that all of the resources were useful, while six failed to list any material as being least supportive. Table 100 reports the responses given by teachers.

Table 100. Classroom Teacher Opinions on Resource Materials in the Unit Kit

Materials	Frequencies Most Useful	Least Supportive
All	4	
Research books	2	
Card games	2	
Tapes	1	
Student handbook	1	
Dialogue tapes	1	1
None		1
No response		5

The materials distributed with the kit did not appear to be prone to too many technical problems. When asked to list specific resource materials that were prone to problems, three teachers were non-committal or reported that none of the materials created problems. The item listed most often was the tapes (3 responses). Additionally, two respondents listed the durability of the handbook as being a problem, one teacher listed the slides and tapes, and another complained that the poor packaging of the games caused parts of the games to be mixed with other materials.

h. Social Uses of Languages Unit

An almost unanimous return of the unit evaluation questionnaire was realized for this unit. Ten of the eleven teachers who used the Social Uses of Language unit submitted unit-end reports. Of this total, one was a fourth grade teacher, three were fifth grade teachers, two were sixth grade teachers, and one had a combined fifth and sixth grade class. Three teachers did not indicate grade levels taught.

To the question of whether the objectives were clearly stated, the majority of the respondents felt that all or some of the unit objectives were clearly stated. All but one of the ten respondents reported that they were able to meet some of the objectives, while one respondent was non-committal.

Classroom teachers had similar options with regard to the appropriateness of the unit for the difficulty levels of pupils in their classes. All ten of the respondents felt all or some aspects of the unit were appropriate. Table 101 reports the responses to the foregoing items.

Table 101. Teacher Responses to Objectives and Appropriateness of the Unit

	Yes	Some	No	No Response
1. Were the objectives clear?	4	6		
2. If clear, were you able to meet them?		9		1
3. Was the unit appropriate as to difficulty for the class' ability?		10		

The most successful activities conducted in class appeared to be consistent with earlier findings. That is, activities that were activity/game oriented were listed most often by classroom teachers as being the most successful activities conducted in the classroom. Similarly, the activities considered least successful, in the opinion of teachers, were also consistent with results in other units. The activities that were academically and verbally oriented were listed most often as being least successful. Appendix 41 presents a detailed listing of responses given by teachers to these two items on the unit questionnaire.

In terms of time, the Social Uses of Language was one of the few units in which the majority of teachers felt that the time element was satisfactory. Sixty percent of the ten teachers returning the unit questionnaire indicated that they were satisfied with the time required to complete the unit. Thirty percent felt otherwise, and one teacher was non-committal.

Consistent with findings from other units, most of the teachers felt that the contents in the Teachers' Manual were useful for instruction. The teacher, on the other hand, were least satisfied with organizational format of the manual--reporting that this aspect of the manual was least helpful. Appendix 42 reports the teachers' responses.

Most of the teachers indicated that the resource materials included in the kit were useful for instruction. However, some inconsistency was evident with regard to the research books. Four teachers claimed that the books were very useful, whereas three felt otherwise. The card games, tapes, and books were mentioned most frequently as being the most useful materials for instruction, while the slides for the dialogue and books were mentioned as being the least supportive. The table below reports the teachers' responses.

Table 102. Classroom Teacher Opinions on Resource Materials in the Unit Kit

Materials	Frequencies Most Useful	Least Supportive
Card games	6	
Tapes	4	1
Research book	4	3
Games	1	
Student handbook	1	
Bulletin board materials	1	
Slides for dialogues		4

Table 102. Classroom Teacher Opinions on Resource Materials in the Unit Kit (Continued)

Materials	Frequencies Most Useful	Least Supportive
Dialogues		1
Film		1
No Response		3
None		1

On the final item in the unit questionnaire, teachers were asked to list the materials most prone to technical problems. Only three items were reported: Activity books (3 times), and slides and tapes (2 times each). Three teachers reported they had no problems and one teacher failed to respond to the item.

VI. PROGRESS EVALUATIONS

VI. PROGRESS EVALUATIONS

There were basically two types of evaluation studies conducted on the elementary portions of the Hawaii English Program. During the 1970-71 school year, the major emphases were on the outcome or "external" evaluation of the Language Skills subprogram. These are discussed in Chapter III of this report. Basically, the outcome evaluation of the Skills subprogram was conducted to determine the effect of the program on pupil learning, comparing HEP students with non-HEP children in grades K-3, using a pre/post-test, control group design.

During the life of the elementary English project (1966-71), progress or "internal" evaluations were conducted systematically on the various subprograms for each of the three major language arts programs of the English project. These individual studies were conducted to provide program planners with feedback for modifications and revisions for specific subprograms. During the 1970-71 school year, more comprehensive studies were conducted on both the Literature Band I (grades K-2) and the Language Systems Elementary (grades 4-6) subprograms to provide progress data on the overall impact of the total program on classroom teachers and students. The results of these two studies are discussed in Chapters IV and V respectively.

In addition to the outcome evaluation, a number of small-scale studies were conducted on the Skills subprogram to assess various aspects of the program. Among these were activities related to the learning center concept being experimented at a Pilot school, the reading achievement of selected second and third graders in a Field school and in a non-HEP school, the services provided by vendors, the durability of materials used in the program, the appropriateness of terminal or exit activities for sixth grade children, etc. These program monitoring activities were conducted to provide additional data for future development and installation of the new English program.

Following are discussions on each of the individual studies conducted during the 1970-71 school year.

A. Comparative Studies of HEP and Non-HEP Students

1. Third Graders

In May 1971, a follow-up study was conducted on third grade pupils in a Field School (Kalihi-Uka) and in a matched non-HEP comparison school. Fifty-seven HEP and fifty non-HEP pupils evaluated last year in a similar study, when they were in the second grade, were used for this investigation.

The comparison school used for the 1970 and 1971 studies was selected during the earlier study to match the Field school on four criteria:

1. Reading scores of 2nd graders on the California Reading Test, administered in 1968-69

2. Scores of 2nd graders on the California Test of Mental Maturity, administered in 1968-69

3. Number of second graders at both schools

4. Location of the school in the same district

The results of the 1970 study had revealed that there were no significant differences on all subscores, as measured by the California Reading Test. Although HEP pupils scored higher on all but one subscore, there were no significant differences at the .05 level.

The study conducted in 1971 used the Gates-MacGinitie Reading Tests. Pupils used in the 1971 study were stratified into three ability subgroups based on the CTMM total scores*. Pupils one standard deviation below the mean were classified as the Low group. The High group were those students who had scores one-half standard deviation above the mean. The Medium group consisted of those pupils who had scores one-half standard deviation above and one standard deviation below the mean.

The Gates-MacGinitie Reading Test series is a new series of tests designed to cover grades K-12. It replaces the Gates Reading Readiness Tests, the Gates Primary and Advanced Primary Reading Tests, and the Gates Reading Survey. In this follow-up study, the Primary B test, designed for second graders, was administered to pupils in the Low subgroups because it was felt this level of measurement would be more appropriate for the low ability students. The Primary C test, designed for third graders, was used for the Medium and High subgroups. Table 103 reports the reliability coefficients, using both the alternate-form and the split-half methods.

Table 103. Reliability Coefficients of the Gates-MacGinitie Reading Tests**

Test	Grade	Subtest Scores	Avg. Raw Score Mean	Avg. Raw Score S. D.	Alt. Form Reliability	Split Half Reliability
Primary B	2	Vocabulary	27.7	10.1	.87	.93
		Comprehension	17.2	7.8	.81	.93
Primary C	3	Vocabulary	32.9	8.3	.85	.89
		Comprehension	25.0	10.3	.87	.91

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* See 1969-70 Annual Evaluation Report of the Hawaii English Project for details on CTMM scores.

** Technical Manual, Gates-MacGinitie Reading Tests, Teacher College, Columbia University, 1965

Several precautions regarding the interpretation and use of this nationally standardized test must be considered in assessing the HEP program. Among these are the individualized learning procedures of the program and the item content of the measuring instrument. The extent to which the individualized procedures were sucessfully implemented and the unique materials successfully used made interpretation of test results extremely difficult and complex. Furthermore, there was the additional precaution that this nationally standardized measure did not necessarily test the effect of the HEP program because the tests may have little validity in assessing HEP program content.

The California Reading Test used in the 1970 study was considered as not being a very valid measure of the HEP program. In the search to satisfy the educational public's desire for using results of standardized measures, it was determined that the Gates-MacGinitie Reading Test series would be more appropriate than others on the market. The use of the Gates-MacGinitie series, therefore, was considered the more acceptable or valid measure for evaluation and comparison purposes.

The Primary B, Form 2, test used to assess the Low subgroups at the experimental and control schools consisted of two subtests: Vocabulary and Comprehension. The Vocabulary portion of the test consisted of 48 items and attempted to measure the child's ability to recognize or analyze isolated words. The pupil was required to select one of four words presented that best corresponded to the given picture illustrating the word.

The Comprehension test measured the child's ability to read and understand whole sentences and paragraphs. It contained 34 items. Each item contained a passage accompanied by four pictures. The pupil was required to select the picture that best illustrated the meaning of the passage or answered the question in the passage.

The Primary C, Form 2, subtest was used to assess students in the Medium and High subgroups. It contained two subtests also: Vocabulary and Comprehension. In the Vocabulary test, 12 items were similar to the Primary B Vocabulary section. In addition, however, 40 other exercises consisting of a test word and four other words, one of which was similar in meaning to the test word, were presented. The test word replaced the picture in the earlier format of the test.

The Primary C Comprehension test was similar to the Primary B Comprehension test. It contained 24 items, with two questions per item. Thus, there was a maximum raw score total of 48.

The tables on the following pages reveal the results on the comparisons made between groups. Table 104 reports the comparisons made on the Vocabulary subtests and Table 105 similarly shows the results of the comparisons made on the Comprehension subtests.

Table 104. Comparison Data on Vocabulary Between HEP and Non-HEP Third Graders

	Experimental School		Control School
Low Subgroups[1]:			
N	8		10
Mean	23.38		13.0
S.D.	10.82		7.80
t-value		2.38**	
Standard Score[3]	41		32
Grade Score	1.9		1.4
Medium Subgroups[2]:			
N	36		22
Mean	27.67		20.27
S.D.	8.38		7.62
t-value		3.12*	
Standard Score[3]	43		37
Grade Score	3.0		2.3
High Subgroups[2]:			
N	13		18
Mean	31.54		35.06
S.D.	9.81		7.68
t-value		1.12(NS)	
Standard Score[3]	46		50
Grade Score	3.4		3.9

* $p < .01$
** $p < .05$

[1] Primary B of Gates-MacGinitie

[2] Primary C of Gates-MacGinitie

[3] Based on the national norms, the mean of each level was set at 50, and the standard deviation at 10. Thus, a standard score of 60 is one S.D. higher than the average, and a standard score of 35 is one and one-half S.D. below the average.

Table 105. Comparison Data on Comprehension Between HEP and Non-HEP Third Graders

	Experimental School		Control School
Low Subgroups[1]:			
N	8		10
Mean	14.75		6.8
S.D.	10.93		4.52
t-value		2.12**	
Standard Score[3]	39		lower than 30
Grade Score	1.9		1.3
Medium Subgroups[2]:			
N	36		22
Mean	22.47		15.73
S.D.	5.40		4.10
t-value		2.98*	
Standard Score[3]	43		37
Grade Score	2.9		2.2
High Subgroups[2]:			
N	13		18
Mean	28.54		29.83
S.D.	8.48		9.30
t-value		.396(NS)	
Standard Score[3]	48		48
Grade Score	3.5		3.6

The results of the study show that between the Low and Medium HEP and non-HEP third graders, the HEP students scored significantly higher on both the Vocabulary and Comprehension subtests than their non-HEP counterparts. The differences between Low subgroup subjects were significant at the .05 level, whereas the differences between the Medium subgroup subjects were significant at the .01 level. The results are particularly noteworthy in that the 1970 study revealed no significant differences when they were compared as second graders, bearing in mind that the measuring instrument used was different.

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* $p < .01$

** $p < .05$

[1] Primary B of Gates-MacGinitie

[2] Primary C of Gates-MacGinitie

[3] See footnote #3 under Table 104

There were no statistically significant differences between the High ability students, although the mean scores favored the non-HEP pupils. The lack of significant differences between the high ability students may be viewed in light of two interesting factors.

First, the delivery of the advanced HEP materials was delayed somewhat by vendors. Students who were in the higher levels of the program, therefore, did not have the opportunity to fully utilize the HEP materials designed for their achievement levels. Whether these pupils would have achieved better on the Gates-MacGinitie tests, however, can only be conjectured.

Secondly, the range of scores and the scores within the range between the high ability subgroups of the two schools on the CTMM may, in part, account for the higher scores by the non-HEP subjects. Table 106 shows the range and distribution of scores.

Table 106. Range/Distribution Scores on the CTMM Total Scores Between High Ability HEP and Non-HEP Third Graders

Raw Score	Experimental School Frequency	Control School Frequency
72	3	1
73	2	
74		
75		1
76		1
77	1	1
78	2	
79		1
80	2	2
81	1	3
82	1	1
83		3
86		1
89		1
91		1
96		1

The data in Table 106 reveal that a little over one-third of the subjects in the non-HEP High ability subgroup had scores higher than the highest score attained by the HEP subjects. Furthermore, over three-fourths of the non-HEP students had scores one standard deviation above the mean, whereas less than one-third of the HEP subjects had scores one standard deviation above the mean. The data, thus, suggests that the non-HEP subjects in the High subgroup were basically higher in ability level than the HEP subjects.

Another interesting finding relates to the grade scores shown in Tables 104 and 105. At first glance, the grade scores present a rather alarming picture. That is, the third graders in all three subgroups are performing on the Gates-MacGinitie Reading Tests at or below the national third grade norms. However, the Teachers Manual cautions that the grade scores are simply average values; they include scores of children who score above and below the average grade score. The Manual, therefore, advises that standard scores be used for obtaining averages or making comparisons because it is an equal-interval scale that permits scores to be added or subtracted. Thus, standard scores gives a clearer indication of a pupil's relative standing in comparisons with national norms groups.

2. Second Graders

In a related study, the total scores of the California Reading Tests, administered to all second graders in April, 1971, as part of the State Minimum Testing Program, were obtained and analyzed for second graders at a Field school (Kalihi-Uka) and a matched, non-HEP comparison school*. A total of 107 HEP and 88 non-HEP subjects were involved in this study. Table 107 below shows the background data on these two schools on the California Test of Mental Maturity.

Table 107. CTMM IQ Data of HEP and Non-HEP Comparison Second Graders, 1970-71

	Field School	Control School
N	106	88
Raw Score		
Mean	61.8	62.0
S.D.	12.9	12.9

A similar study in 1970, comparing the second graders at these two schools on the California Reading Test, revealed no significant difference between groups. The 1971 data, on the other hand, revealed that the HEP pupils at the Field school scored significantly higher ($p < .05$) than their control counterparts. Table 108 reports the findings.

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*Control school is the same school used in the 1970 and 1971 studies described above.

Table 108. Comparison Data Between HEP & Non-HEP Second Graders on the California Reading Test Total Scores

	Experimental School	Control School
N	107	88
Mean	41.35	35.19
S.D.	17.93	19.34
t-value	2.30**	
Grade Placement	2.6	2.3

$p < .05$

In reviewing the data, it should be noted that there were no significant differences in ability at the .05 level, as measured by the CTMM, between the 1969-70 and the 1970-71 second graders at the Field school. The mean raw scores of the 1969-70 subjects, however, were slightly higher. The differences between the 1969-70 and 1970-71 second graders at the control school, on the other hand, were significant. The 1969-70 subjects had significantly higher scores ($p < .05$). However, there were no significant differences in ability between the 1971 experimental and control groups.

Bearing these factors in mind, the results in Table 107 reveal that HEP Field school pupils performed significantly better than the non-HEP control subjects on the California Reading Test, and achieved as well as the average national norms group second grader. The non-HEP control students, on the other hand, scored on an average of three months below the national norms group second grader.

Finally, the assumption that there is an inherent "multiplier" or "cumulative" effect within the HEP program seems to be supported by the data of all three studies described above. The findings of the two studies conducted this year (1971) appear to indicate a trend not only among second and third graders but also among the low and medium ability pupils as well. Further follow-up studies on these sample subjects should be conducted to determine whether the achievement gain patterns will continue.

3. Performance of Non-English Speaking Pupils

During the 1970-71 school year, an attempt was made to examine the performance of non-English speaking pupils in the HEP Language Skills program. The non-English speakers were identified during the earlier part of the school year by classroom teachers who had personal contact with these pupils. It seemed reasonable to believe that the teachers' judgment about the pupils' English proficiency was more reliable and valid than any other available criteria.

Subsequently, among the total sample of HEP pupils randomly selected for the 1970-71 outcome evaluation, 21 pupils were identified as being non-English speakers. Three pupils had since left the HEP Language Skills program, nine were kindergarten pupils, eight were first graders, and one was a second grader. All three school types--Installation, Pilot, and Field--were represented in this sample.

Following the same procedures, a total of 11 pupils were identified as being non-English speakers among the total random sample of control pupils selected for the outcome evaluation. Of these 11 pupils, five were kindergarten pupils, another five were first graders, and one was a second grader.

The performance measures used in the present study were limited to the four basic skills of reading, writing, listening, and speaking. The instruments comprised the Gates-MacGinitie Reading Test, (for grades 2 and 3), the HEP-developed Handwriting Exercise (for grades 1-3), the Cooperative Primary Listening Test (for grades 2 and 3), the HEP-developed Taped Listening Exercise (for grades K and 1), and the HEP-developed Speaking Test (for grades K-3). Data on these measures, as well as pupils' IQ and socio-economic status (SES) were collected concurrently with the external evaluation effort*.

As was the case with the total HEP and control samples, the HEP non-English speaking pupils , with the exception of kindergarteners, were found to have lower IQ scores and low socio-economic status (indicated by higher scores), as compared with the control non-English speaking pupils. The mean scores for IQ and SES were tabulated in Table 109.

Table 109. IQ and SES Mean Scores for Non-English Speaking Pupils

	HEP			Non-HEP		
	K	1st Grade	2nd Grade	K	1st Grade	2nd Grade
IQ	95.12 (N=8)	88.50 (N=6)	73.00 (N=1)	84.50 (N=4)	93.00 (N=4)	93.00 (N=1)
SES	70.67 (N=9)	61.33 (N=6)	77.00 (N=1)	62.80 (N=5)	58.00 (N=5)	58.00 (N=1)

Note: Number in parentheses indicates actual number of cases used in the computation of the mean score.

As the number of non-English speaking pupils in the HEP and control schools was extremely small, no inferential statistics was used in analyzing the performance data. Instead, only post-test mean scores for the various achievement measures were computed for the HEP and control pupils by grade level. These were tabulated in Table 110.

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* As indicated earlier, the non-English speaking pupils were included in the outcome evaluation studies.

Table 110. Mean Scores for Reading, Writing, Listening, and Speaking for Non-English Speaking and Regular Pupils*

	Non-English Speaking HEP			Regular HEP			Non-English Speaking Non-HEP		
	K	First Grade	Second Grade	K	First Grade	Second Grade	K	First Grade	Second Grade
Gates-MacGinitie Reading Test Vocabulary	17.67 (N=3)	12.50 (N=4)	19.00 (N=1)	15.58 (N=40)	14.66 (N=49)	23.80 (N=31)	17.00 (N=1)	22.33 (N=3)	21.00 (N=1)
Gates-MacGinitie Reading Test Comprehension	17.00 (N=3)	6.00 (N=4)	14.00 (N=1)	11.72 (N=39)	11.98 (N=49)	15.32 (N=31)	7.00 (N=1)	13.33 (N=3)	13.00 (N=4)
Handwriting Exercise		18.67 (N=6)	28.00 (N=1)		17.58 (N=128)	24.38 (N=29)		10.00 (N=4)	28.00 (N=1)
Coop. Primary Listening Test			22.00 (N=1)			28.77 (N=30)			18.00 (N=1)
Taped Listening Test	6.50 (N=8)	7.50 (N=8)		6.72 (N=226)	7.14 (N=131)		5.00 (N=4)	6.00 (N=4)	
Speaking Test List. Subscore**	4.00 (N=8)	6.71 (N=7)	14.00 (N=1)	7.90 (N=163)	10.41 (N=113)	9.93 (N=31)	8.00 (N=4)	11.25 (N=4)	16.00 (N=1)
Speaking Test Talk. Subscore**	5.00 (N=8)	12.71 (N=7)	4.00 (N=1)	7.55 (N=165)	9.99 (N=114)	8.91 (N=33)	5.75 (N=4)	11.00 (N=4)	17.00 (N=1)
Speaking Test Total Score**	9.00 (N=8)	19.43 (N=7)	18.00 (N=1)	13.90 (N=182)	19.05 (N=121)	18.24 (N=33)	13.75 (N=4)	22.25 (N=4)	33.00 (N=1)

* Number in parentheses indicates actual number of cases used in the computation of the mean score.

** Two forms of the Speaking Test were used, one for grades K and 1 and the other for grade 2.

At first glance it might seem that the control non-English speaking pupils were performing better than their HEP counterparts. A comparison of mean scores showed that the HEP kindergarten pupils seemed to be able to hold their own. The HEP first graders, however, outperformed their control counterparts in only three instances, while being outperformed in the other four. In the same vein, the HEP second graders scored higher than the control second graders on only two measures, while the latter was shown to be superior on four other measures.

A closer perusal of the data revealed that the superiority of the control pupils was mainly due to their higher performance in the speaking skills, which were represented by three subscores. In fact, if one considers the four basic skills separately, it would appear that the HEP pupils were superior to their control counterparts in writing and listening. In reading, the data showed (1) the HEP kindergarteners did better than their control counterparts; (2) the control first graders were superior to their HEP counterparts; (3) the HEP and control second graders were about equal in terms of achievement. In speaking, the performance of HEP pupils was consistently lower than that of the control group.

When the non-English speaking HEP pupils were compared with the regular HEP pupils* the latter were shown to achieve higher. The differences, however, were by no means remarkable. As a matter of fact, in eight instances the non-English speaking pupils surpassed their English speaking counterparts in achievement. A breakdown by grade level indicated that the non-English speaking kindergarteners achieved better than regular kindergarten pupils in reading vocabulary and comprehension. In listening and speaking, the regular pupils performed better.

The non-English speaking first graders scored higher than the regular first graders in the listening, talking, total speaking portions of the Speaking Test, and in handwriting. Their achievement was lower than that of their regular counterparts in reading vocabulary and comprehension and on the listening part of the Speaking Test.

The non-English speaking second graders showed some superiority in handwriting and the listening part of the Speaking Test over the regular second graders, while the latter scored higher in reading, listening and speaking.

The major part of the results obtained in this study seemed easily interpretable. That the non-English speaking kindergarteners should score higher than the regular kindergarten pupils on the reading test should not come as a surprise if one realizes that both the non-English speaking and regular kindergarteners were in a sense "beginners" in the HEP program. The differences in prior knowledge and skills in reading, should tend to be relatively small. In upper grade levels, the differences should tend to be greater, as seemed indicated by the higher reading mean scores computed for the regular first and second grade pupils.

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* The non-English speaking pupils were actually included in the regular sample. However, in view of the small number on non-English speaking pupils, it seemed reasonable to believe that their inclusion did not seriously affect the mean scores computed for the regular sample.

Another interesting finding was that the non-English speaking first and second graders showed higher achievement in handwriting. Their superiority over the regular pupils in this respect could probably be interpreted as a result of their natural tendency to spend more time on a skill in which low English proficiency was less of a handicap. As expected, the Speaking Test results indicated that the regular pupils were generally superior to the non-English speaking pupils in their speaking ability.

As a concluding remark, it should be pointed out that in view of the small sample sizes used in the present study the generalizability of the results reported above should be considered as very limited. The interpretations should likewise be regarded as only tentative. Taken at its face value, the data seemed to suggest that the HEP Language Skills program appeared to be as beneficial to non-English speaking pupils as other language arts programs. Moreover, if the test results were any indication, the non-English speaking pupils did not seem to be "lost" in the HEP classroom. As a matter of fact, the data suggested that not only could they hold their own most of the time, they could even surpass the regular pupils on occasion.

4. Spelling 19 Program

This study was conducted to compare the spelling ability of HEP pupils who have completed the Spelling 19 subprogram of the Language Skills program with that of a random sample of non-HEP 6th graders. It should be pointed out at the outset that it was not the purpose of this study to find out the relative effectiveness of the Spelling 19 program. To determine the effectiveness of the Spelling 19 program relative to other programs, one would compare the performance of HEP pupils who have completed the program with that of a comparable non-HEP group (e.g. non-HEP 3rd graders in other spelling programs). The non-HEP 6th graders sampled for the present study did not, of course, represent a comparable non-HEP group.

The spelling task used in the study consisted of a list of 23 words taken randomly from word lists for sixth graders and compiled by the Educational Development Laboratories*. Subjects were given 10-15 seconds to spell each of the 23 words in a group testing situation.

Two samples were drawn from HEP and non-HEP populations. These comprised of 34 HEP 3rd graders who had completed the Spelling 19 program and 102 non-HEP 6th graders**. The spelling test was administered to the two sample groups in May, 1971.

Test results indicated a significant mean score difference favoring the non-HEP group (See Table 111). The F ratio was significant beyond the .01 level (See Table 112).

This outcome renders it unreasonable to assume that by completing the Spelling 19 program the average HEP pupil could attain a spelling ability level comparable to that attained by the average non-HEP 6th grader.

Table 111. Comparison Data Between Sample HEP Third Graders and Non-HEP Sixth Graders on the Spelling 19 Program

	HEP	Non-HEP
Sample size	34	102
Mean Raw Score	5.91	13.55
Standard Deviation	3.62	5.89
S.E. of Mean	.62	.58
Maximum	13.00	22.00
Minimum	1.00	.00
Range	12.00	22.00

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* See Taylor, S.E., Frackenpohl, H., and C.E. White, A Revised Core Vocabulary, Research and Information Bulletin No. 5 (Revised), EDL, March, 1969.

** Of the HEP sample, 21 were from Kalihi-Uka, 7 from Kualapuu, 3 from Maunaloa, and 3 from Kaunakakai. Of the non-HEP sample, 31 were from Kualapuu, 30 from Kaunakakai, 26 from Kalihi-Uka, and 15 from Maunaloa.

Table 112. Analysis of Variance Data of Sample HEP Third Graders and Non-HEP Sixth Graders on the Spelling 19 Program

	Sum of Squares	df	Mean Square	F
Between Groups	1487.36	1	1487.36	50.48*
Within Groups	3947.98	134	29.46	
TOTAL	5435.34	135		

*$p < .01$

In another phase of this study, an evaluation was conducted to determine whether the present list of words in the Spelling 19 subprogram was appropriate for sixth graders.

Non-HEP sixth grade students at Kalihi-Uka were randomly selected for the test administration. Thirty pupils were administered one form of the test (Form A) and 28 another form of the test (Form B).

Twenty-one words from Book 19 (sixth grade level) were selected for both the Form A and Form B tests. The pupils in each group (A & B) were then asked to spell the words.

The results of the test show that the Spelling 19 subprogram is appropriate for sixth graders and that the level of difficulty in Book 19 is sufficient to meet the needs of the sixth grade spelling program. Tabulation of scores for the Form A test is shown in Table 113 and for the Form B test in Table 114. Table 115 reports the tabulation of scores of both tests (Form A and B combined).

Table 113. Distribution of Test Scores, Form A

Score	Frequency	%
9	1	3 %
15	1	3 %
16	1	3 %
17	2	7 %
18	3	10 %
19	4	13 %
20	15	50 %
21	3	10 %

* Mean =18.90 (out of maximum score of 21)

** Sample consisted of 30 sixth graders at Kalihi-Uka.

*** Test was administered on April 20, 1971.

Table 114. Distribution of Test Scores, Form B

Score	Frequency	%
3	2	7.0%
5	1	3.6%
6	1	3.6%
8	4	14.0%
9	2	7.0%
10	1	3.6%
11	1	3.6%
12	3	10.7%
13	3	10.7%
14	2	7.0%
15	3	10.7%
16	3	10.7%
17	1	3.6%
18	1	3.6%

* Mean = 11.39 (out of maximum score of 21).
** Sample consisted of 28 sixth graders at Kalihi-Uka.
*** Test was administered on April 21, 1971.

Table 115. Distribution of Test Scores, Forms A & B Combined

Score	Frequency	%
3	2	3 %
5	1	2 %
6	1	2 %
8	4	7 %
9	3	5 %
10	1	2 %
11	1	2 %
12	3	5 %
13	3	5 %
14	2	3 %
15	4	7 %
16	4	7 %
17	3	5 %
18	4	7 %
19	4	7 %
20	15	26 %
21	3	5 %

Mean = 15.27 (out of maximum score of 21). This indicates that the average pupil in the sample was able to spell 72% of the words correctly.

The overall conclusion that can be reached from the foregoing findings is that the Spelling 19 subprogram in the Language Skills program contains vocabulary which are sufficiently difficult for students at the sixth grade level. The average sixth grader in this study was able to spell correctly only 72% of the 21 words used in the test. Furthermore, children below the sixth grade level who completed the HEP Spelling 19 subprogram were not able to match non-HEP sixth graders in terms of spelling proficiency. Inasmuch as the sample HEP group used in this study were not beyond the third grade level at the time of the study, it is reasonable to assume that other influencing factors need to be considered in making comparisons of this nature. Among these would be such factors as the effects of maturation, history, etc. A more reasonable comparison, which would provide more valid results, would be to compare sixth graders who have completed the Spelling 19 program with comparable non-HEP sixth graders.

5. Purposeful Writing, Level B, Subprogram

In an effort to finalize the development of the Purposeful Writing, Level B, subprogram of the Hawaii English Program, a group of eighty non-HEP sixth graders were administered an HEP-developed test in June, 1971, at ten different schools throughout the state (see Appendix 43). The purpose of the testing was to determine whether non-HEP sixth grade students were able to successfully perform the terminal activities of the Purposeful Writing, Level B, subprogram.

The eighty students were randomly selected by the schools' Installation teachers with the qualification that these students be able to read and write*. Each group of eight students from each school were divided into two different subgroups and administered a different form of the same test. Students were assigned to work in pairs. The test for each form contained two parts. Part I on both tests required students to communicate in writing to their partners the directions or instructions for drawing specific symbols (e.g. circles, blocks, squares, etc.). Both partners were given specified time limits to complete the writing of instructions. At the end of the time limit, the students exchanged their papers and were required to draw the symbols as instructed by their partners.

Part II of both forms of the test also contained two items and required the students to write letters requesting for and/or providing specific information to the person they were writing to. This activity was also timed.

The scoring for Part I on both forms was accomplished by checking whether the drawn figures were correct or not. Symbols that were partially correct were checked as being in error.

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* Entry into the HEP Purposeful Writing, Level B, subprogram requires the ability to read and write.

The scoring for both items on both forms for Part II was accomplished by assigning one (1) point for each direction that was included in the letter. All items in Part II for both forms were assigned a maximum of four (4) points each, except for item #2 on Form A. This latter item was assigned a maximum of three (3) points.

The findings for this study are shown in Tables 116 and 117 shown below.

Table 116. Number of Students With Correct Responses on Items #1 and #2, Part I, on Purposeful Writing, Level B, Test

	Form A	(N=40)%	Form B	(N=40)%
Both Items Correct	5	12.5%	4	10%
Item #1 Correct	10	25 %	8	20%
Item #2 Correct	20	50 %	18	45%

Table 117. Mean Scores for Items #1 and #2, Part II, on Purposeful Writing, Level B, Test

	Form A (N=40) Mean	Form B (N=40) Mean
Item #1	3.38	3.38
Item #2	2.61*	3.71
Combined (#1 and 2)	5.95**	6.81**

* Based on a maximum of three (3) points. All other items have a maximum of four (4) points.

** Item A has a combined maximum of seven (7) points. Item B has a combined maximum of eight (8) points.

The results from Table 116 reveal that non-HEP sixth graders had a difficult time in effectively communicating specific instructions is writing. Only 25 and 20 percent respectively of the forty students on each form were able to correctly draw the symbols as instructed. Part of the difficulty may have been attributed to the complex nature in the arrangement of the three symbols presented. Additionally, the ability of the partners to interpret the instructions may have influenced the performances of the sample subjects.

Students were able to communicate more effectively in item #2 of Part I on both forms, as 50 and 45 percent respectively of the partners were able to draw the figures correctly on both forms. It should be cautioned, however, that the uncontrollable variables described above may also be factors influencing the performances made by the sample students.

The data in Table 117 suggest that the non-HEP sample sixth graders had a relatively easier time in completing the letter writing tasks. Part of this may be attributed to the fact that letter writing activities are generally included in the regular non-HEP instructional program by the end of the sixth grade year.

Based on the assumption that HEP students who complete the Purposeful Writing, Level B, subprogram successfully perform all or most of the tasks similar to those presented in this test, it seems reasonable to conclude that these HEP students will be able to perform as well as or better than sixth graders presently not in the program. This conclusion is reached on the further assumption that HEP students will be exposed to an instructional program which includes formal instructions in letter writing and direction giving (e.g. Purposeful Writing, Level A and B, subprograms).

It would also seem reasonable to conclude that the terminal or exit activities of the Purposeful Writing, Level B, subprogram are appropriate for and sufficiently difficult for the so-called sixth grade level of learning. The test results indicate that sixth graders were tackling many of the tasks similar to those encountered in the HEP program.

It is recommended that HEP planners continue to monitor this particular phase of the program to reconcile for the "multiplier" or "cumulative" impact of HEP. That is, the "multiplier effect" of HEP may render some of the tasks as being too easy as the student progresses toward the sixth grade in HEP.

B. Comparative Studies Within the HEP Program

1. Learning Center at Waiakea Elementary School

a. Teacher Questionnaire

The Waiakea Learning Center was established in September, 1970, at Waiakea Elementary School (Hawaii School District) to test and demonstrate the feasibility of using a learning center organization to include the Hawaii English Project K-3 Language Skills subprogram materials. More specifically, the learning center was designed to (1) provide a learning environment in which children have the highest possible availability ratio of equipment and materials per child, as compared to a self-contained classroom; and (2) provide the HEP Language Skills materials and equipment to children at a substantially reduced cost over furnishing a self-contained or 3-on-2 classroom.

The learning center was organized to include a one and one-half set of HEP language skills materials, to be shared in a central location by over 180 grades K-2 pupils. A schedule was designed so that 90 pupils from one self-contained and one 3-on-2 class would share the HEP materials in two different two-hour shifts. The student grouping included two self-contained grade K, one 3-on-2 grades K-1, and one 3-on-2 grades 1-2 classes.

During the initial planning stages, it was decided that one of the criteria for judging the success of the Waiakea Learning Center should consist of an unsigned questionnaire about the center to be completed by teachers using the learning center, the HEP Installation teacher, and the principal of Waiakea Elementary School. It was also decided that not more than two of the teachers should have negative attitudes about the center. Such a questionnaire was subsequently developed and administered to seven teachers, the Installation teacher, and the principal in May of 1971.

Data obtained through the questionnaire indicated an overall positive attitude toward the learning center. The majority of the respondents--five teachers, the Installation teacher and the principal--indicated that the learning center had been a success. Three teachers, the Installation teacher, and the principal recommended that similar learning centers be set up in other HEP schools. On the other hand, it was also evident that teachers using the learning center had encountered difficulties peculiar to the learning center setting--most notably that of providing adequate guidance for the increased number of pupils at the center and controlling the noise level which tended to prevent pupils from concentrating on their learning activities. Another major concern was the proper maintenance of HEP equipment and materials. Details of the survey are described as follows.

Of the seven teachers, three had taught grades K-2, another three had taught grades K-1, the other had taught only at the kindergarten level. Six of them had previously taught 3-on-2 classes and the other had taught in the self-contained setting.

Six of the teachers had taught four or more years in elementary schools, while the other had taught for two years at the elementary level. Four of the seven teachers had taught in the HEP Language Skills subprogram for two years; the other three had taught the program for one year. Four of them were teaching HEP classes at Waiakea Elementary School last year. All seven teachers had attended the two week district workshop the past year. The Installation teacher, who had been with the HEP for two years, was also the Installation teacher at Waiakea Elementary School in 1969-70. The principal had been involved with the implementation of HEP for two years.

In the questionnaire the respondents were first asked to rate some general aspects of the Waiakea Learning Center on a five-category scale. The ratings were tabulated in Table 118.

Table 118. Ratings on Aspects of the Learning Center

Aspect	Ratings				
	Very Favorable	Favorable	Neutral	Un-Favorable	Un-Certain
1. Individualization of Learning	2	7			
2. Variety of materials	2	7			
3. Self-directed learning	1	8			
4. Adequacy of staff		3	2	4	
5. Use of student tutors		8	1		
6. Administration of HEP materials and programs	1	3	5		
7. Record keeping	1	7		1	
8. Teacher planning time	1	4	2	2	
9. Use of programmed materials		8			1
10. Teacher role in guidance		4	1	4	
11. Student involvement in decision making	1	7	1		
12. Room arrangement	1	4	4		
13. Student interest in learning		9			

The ratings indicated that the major concern of the respondents seemed to be the adequacy of staff, teacher role in guidance, and teacher planning time. The learning center seemed to need more teachers than what was presently available to better "manage" pupils learning activities and give adequate guidance to individual pupils. Teachers also indicated a need for more planning time to handle pupils learning problems.

Since the HEP is an individualized language arts program, its effects on the various types of pupils are a major concern of program planners. The respondents were asked to rate the effects of the learning center on various categories of pupils. The results were as follows (Table 119).

Table 119. Ratings on Effects of the Learning Center on Different Types of Pupils

Pupil Type	Ratings					
	Very Positive	Fairly Positive	No Help	Harmful	Uncertain	None In Class
1. Academically gifted	4	4				1
2. Average	6	3				
3. Culturally deprived		5			4	
4. Non-English speakers		1				8
5. Emotionally disturbed			4		1	4
6. Academically retarded		2	4		2	

Among the six categories of pupils, the learning center seemed to offer no help to only the emotionally disturbed and the academically retarded. According to the respondents, the learning center was most effective with the average and academically gifted pupils. The latter additudes, however, were not supported by actual data obtained on pupil progress.

In a following section of the questionnaire, a number of statements pertaining to various aspects of the learning center were made. The respondents were asked to indicate the extent to which they agreed or disagreed with each of the statements. The following is a tabulation of their responses (Table 120):

Table 120. Attitudes About Various Aspects of the Learning Center

Statement	Ratings				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Un-Certain
1. There is no particular grade level when HEP pupils should begin to use the learning center.	3	6			
2. The learning center setting places some limitations on the progress that can be made by HEP pupils.	4		4	1	
3. An older HEP child generally benefits more from the learning center setting than a younger HEP child.			8		1
4. The learning center setting is more suited to the HEP Language Skills program than the self-contained or 3-on-2 setting.		3	1	1	3
5. The learning center setting which allows many pupils to work together at the same time, covers too large a span of ages.			8		1
6. The learning center setting presents a serious management problem to the teacher.	4		3	1	1
7. Most of the children remember which programs they are working on in Language Skills.		9			
8. The learning center tends to get overcrowded during the HEP language arts period.	4	3	2		
9. The language center tends to get too noisy for the pupils to concentrate on their learning activities.	3	1	3	1	1
10. In general, the learning center is adequately equipped.	1	8			

Table 120. Attitudes About Various Aspects of the Learning Center (continued)

Statement	Ratings				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Un-Certain
11. The various components of the HEP software (e.g. books, stacks, students folders, etc.) are stored in appropriate places in the learning center.		6	3		
12. The various components of the HEP hardware (e.g. record players, tape recorders, typewriters, bookcases, etc.) are stored in appropriate places in the learning center.		5	3		1
13. The HEP children seem to like the learning center setting more than the self-contained or 3-on-2 setting.		1			8
14. The learning center has served to increase the utilization rate of HEP materials and thus reduce the per pupil cost of materials.	2	5			2
15. Working in the learning center setting, HEP pupils have no difficulty in:					
a. Operating HEP equipment.	1	8			
b. Selecting their own activities to work on.	1	8			
c. Following through on activities they have selected.	1	6			1
d. Seeking help from the teacher or other children when they need it.	1	7			1
e. Working without disturbing others.	1	2	4		2
f. Helping other children to learn.	1	7			1

Table 120. Attitudes About Various Aspects of the Learning Center (continued)

Statement	Ratings				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Un-Certain
g. Recording their own progress.	1	8			
h. Evaluating their own work during the language arts period.	1	7			1
i. Communicating orally with their peers.	1	8			
j. Understanding new tasks.	1	7			1
k. Reading a wide variety of books.		8			

All respondents agreed that there was no particular grade level when HEP pupils should begin to use the learning center. Four of the nine respondents felt that the learning center setting placed some limitations on the progress that could be made by HEP pupils. The predominant majority (8) disagreed that an older HEP child would benefit more from the learning center setting than a younger HEP child. Only one-third of the respondents agreed that the learning center setting was more suited to the HEP Language Skills subprogram than the self-contained or 3-on-2 setting. The others either disagreed with the statement or were uncertain.

According to the respondents, age span did not pose a problem for the learning center setting--the majority (8) disagreed with the statement that the center covered too large a span of ages. About half (4) of the respondents indicated that the learning center setting presented a serious management problem to the teacher. Seven respondents felt that the center tended to get overcrowded and four indicated that it also tended to get too noisy for pupils to concentrate on their learning activities. All nine respondents felt that in general the center was adequately equipped and the majority (6) of them agreed that the various components of the HEP software (e.g. books, stacks, student folders, etc.) and hardware (e.g. record players, tape recorders, typewriters, bookcases, etc.) were stored or installed in appropriate places at the center. Most (8) respondents were uncertain as to whether HEP children liked the learning center more than the self-contained or 3-on-2 setting. Only one respondent indicated that the children seemed to like the learning center more. The majority (7) of the respondents agreed that the center had served to increase the utilization of HEP materials and thus reduce the per pupil cost of the materials.

With regard to specific pupil behaviors, all respondents agreed that the children had no difficulty in operating HEP equipment at the learning center. According to the predominant majority (8) of the respondents, the children also seemed to have no difficulty in performing other target behaviors--e.g. selecting their own activities to work on, following through on activities selected, etc.--excpet that of working without disturbing others, where four respondents indicated that the children had difficulty in this area.

Following the statements, the respondents were asked if, based on their experience with the Waiakea Learning Center, they would recommend that similar learning centers be set up in other HEP schools. Five respondents gave an affirmative answer. One teacher qualified her positive response by pointing out that the number of pupils at the center should be reduced. Three teachers indicated that they would not recommend the setting up of learning center in other HEP schools. One teacher did not respond to the item. Those who responded affirmatively, stated that in the learning center setting one set of HEP materials and equipment could be used by more students, leading to increased possibilities for expanding the HEP program. It was also pointed out that the learning center, which could accommodate various grade levels at one time, would make it possible to reduce the number of self-contained classes.

The rest of the questionnaire consisted of more specific questions, some having a direct bearing on the effectiveness of the learning center. The respondents were asked if, based on the criterion that the Waiakea Learning Center should serve to lower the per pupil cost of HEP materials, they felt the learning center had been a success. Seven of the nine respondents gave a positive response. The other two indicated that they were not sure. Those who gave the positive response stated that more pupils were given the opportunity to use HEP materials in the learning center setting. One of the teachers who gave the "not sure" response indicated that she would like to see the number of pupils reduced from ninety to sixty. The other teacher who also gave the "not sure" response expressed doubts as to whether pupils could retain the learning that took place at the center.

The seven teachers were also asked to indicate where they would choose to teach an HEP class if they could have their choice. Three teachers chose the Waiakea Learning Center, three others chose the self-contained setting, and one chose the 3-on-2 setting. The principal, who was asked to indicate the type of setting he would choose for the implementation of HEP, favored the Waiakea Learning Center, stating that the learning center was most flexible in providing for a variety of learning groupings. The Installation teacher indicated that the Waiakea Learning Center seemed to be best suited for the implementation of the HEP program if a smaller number of pupils were allowed to use the center at one time.

The seven teachers and the principal were also asked to indicate the kind of setting which they felt was best for teaching with HEP materials. Three respondents, including the principal, favored the Waiakea Learning Center; two chose the self-contained setting; and three indicated that the 3-on-2 setting was the best.

The teachers were further asked to rate the effectiveness of the various types of setting in terms of learning outcomes. Two teachers indicated that the Waiakea Learning Center was more effective than the regular HEP 3-on-2 or self-contained classroom; one teacher stated that the center was as effective as the other types of setting; the other four teachers felt that the center was less effective than the other class types.

In response to other questionnaire items, four teachers indicated that pupils showed more undesirable behaviors (e.g. disruptive behavior, excessive talking, doing nothing, etc.) at the Waiakea Learning Center than in a regular HEP 3-on-2 or self-contained classroom. Two other teachers and the Installation teacher felt otherwise. Another teacher gave a "not sure" response.

Four teachers stated that it was hardest to teach with the HEP materials in a self-contained setting. The other three said that it was at the Waiakea Learning Center that teaching with the HEP materials was the hardest.

One teacher and the Installation teacher indicated that it was at Waiakea Learning Center that pupils found it the easiest to get to use the equipment and materials. Two teachers favored the 3-on-2 setting and three others chose the self-contained setting. One teacher did not respond to the item.

The teachers were almost unanimous (six out of seven) in pointing out that HEP equipment and materials seemed to get broken or damaged more easily at the Waiakea Learning Center than in a regular HEP 3-on-2 or self-contained classroom. The other teacher and the Installation teacher gave a "not sure" response. According to five teachers, the equipment repair and maintenance problem was greater at the Waiakea Learning Center than in a regular HEP 3-on-2 or self-contained classroom. One teacher indicated otherwise. The other teacher and the Installation teacher were "not sure". The greater repair and maintenance problem was attributed to the heavy use of equipment and materials, brought about by having over 180 pupils using the materials each day.

According to all nine respondents, the greatest advantage of the learning center over the 3-on-2 or self-contained classroom was the maximum utilization of HEP equipment and materials at a central location. The maintenance of the HEP equipment and materials, on the other hand, was described as the greatest disadvantage of the learning center. Constant use of equipment and materials caused wear and tear, and replacement and servicing of equipment was not always immediate. Another disadvantage was that too many pupils were involved in the learning process at one time at the learning center. The center tended to get overcrowded, which made it very difficult for teachers to get to know individual pupils and provide adequate guidance.

Other comments made by the respondents are summarized as follows:

Advantages: (1) The learning center provided for a group approach (by teachers) to HEP problems; (2) The learning center provided for more adults to help learners; (3) The learning center offered teachers the chance to "specialize"; (4) The learning center involved a greater variety of grade levels and types of children; (5) Teachers and children are "forced" to become more careful and serious about house-keeping and maintenance; (6) Teachers were able to discuss problems by themselves and come up with solutions; (7) The learning center provided more space for instruction; (8) Pupils found it easy and convenient to move from one reader mode to another; (9) Children seemed to enjoy working together freely at the learning center; (10) There were "ready made" tutors from the very onset of the program (there was never a need to rush to train a core of tutors); and (11) The children received various points of emphasis because there were four teachers working with the children.

Disadvantages: (1) It was difficult to determine whether or not children carried out the learning procedures properly, (in many instances learning and teaching became haphazard); (2) It was very difficult to follow up on the proper care and use of materials and equipment; (3) At the learning center there was a constant need to remind children about unacceptable behaviors and the proper use of materials and equipment; (4) The teachers did not have time to listen to children read; (5) The actual time that children spent working with HEP materials in the learning center was not sufficient (with large groups of children at the learning center, the noise level was high; children were easily distracted; and it was very difficult to keep them productive for more than a full hour); (6) Because of the large group size, it was impossible to satisfy the needs of all children; (7) Compatibility among teachers might be a problem; and (8) It was difficult to get the materials ready for use by the next group.

Five teachers and the Installation teacher singled out the great number of children at the center as the most serious problem they had to face. The teachers felt that it was difficult to get to know the children well enough to give them proper guidance. The Installation teacher observed that at the beginning teachers tended to look out only for their own children. One teacher admitted that she was very autocratic at times for expediency. She explained that with many children, it was easier to tell them what to do than to sit with them counseling.

The principal pointed out that there was a serious lack of coordination between HEP and the 3-on-2 program. The Waiakea Learning Center called for use by 3-on-2 teams. The school was not granted an additional one and two team in September and had to forge a "3-on-3" with 71 learners. The "3-on-3" team had no previous team experience or training.

In the final section of the questionnaire, the respondents suggested various measures which, they felt, might help increase the effectiveness of the Waiakea Learning Center. Four teachers and the Installation teacher recommended that the number of pupils using the center be reduced. The Installation teacher also suggested that the class schedules be revised in such a way as to make it possible for the learning center to accommodate fewer pupils at one time.

Three teachers felt that an aide should be hired to take care of the maintenance of equipment and materials. Another suggestion was that only equipment and materials that could stand rough handling should be used at the center. Another teacher urged that a study be carried out to determine how much experience with HEP a teacher should have in order to be competent for the learning center setting. Two teachers indicated that the HEP materials at the learning center should be rearranged to make the center more functional. A specialist should probably be hired to do the job. One teacher suggested the setting up of a A. V. pool to alleviate the equipment maintenance problem.

The principal pointed out that the initial plans for the learning center included several alternatives all of which required some renovation of the classroom building. Because of fund requirements and the short time between planning and implementation, none of the alternatives could be implemented. The Waiakea Learning Center, as it was set up in September, 1970, was actually a modified version of what was originally proposed.

Based on the foregoing findings, the following conclusions have been drawn:

1. The respondents' overall attitudes toward the Waiakea Learning Center, as it was set up in September, can be described as fairly positive.

2. The majority of the respondents felt that the learning center, as a project designed to lower the per pupil cost of HEP materials, had been a success.

3. The respondents agreed that the learning center provided more pupils with the opportunity to use the HEP equipment and materials.

4. Maximum utilization of HEP equipment and materials was the greatest advantage which the learning center had over the 3-on-2 or self-contained setting.

5. The majority of respondents recommended that similar learning centers be set up in other HEP schools.

6. Teachers at the learning center found it very difficult to provide adequate guidance for individual pupils because of the large class size.

7. According to the majority of respondents there was no evidence that the learning center setting was more effective than the 3-on-2 or self-contained classroom in terms of learning outcomes. In fact, there was some evidence indicating the opposite (Progress data are described in the following sections).

8. According to the majority of respondents there was no evidence that the pupils liked the learning center setting more than the 3-on-2 or self-contained classroom.

9. The majority of respondents felt that there were more pupil behavior problems at the learning center than in a 3-on-2 or self-contained classroom.

10. The proper maintenance of HEP equipment and materials was a major problem at the learning center.

11. The majority of the respondents felt that the learning center tended to get overcrowded and noisy, which made it difficult for pupils to concentrate on their learning activities.

b. Comparisons Between Waiakea Elementary and Other Pilot School Pupils

As part of an evaluation procedure to determine the relative effectiveness of the Learning Center concept at Waiakea Elementary School, a comparative study was conducted on Waiakea pupils and pupils from six other HEP Pilot schools. The main objective of the investigation was to find out whether or not pupils using the learning center attained as many language skills components by June of 1971 as pupils from the other Pilot school HEP classes. A second objective was to examine the relative performance of Waiakea and non-Waiakea pupils in the area of self-direction. The Waiakea sample consisted of 56 children, of whom 32 were kindergarteners and 24 were first graders. The non-Waiakea sample consisted of 64 pupils, of whom 28 were kindergarteners and 36 were first graders. Data on pupils' learning outcomes in terms of the completion of a selected list of 37 HEP Language Skills components and fulfillment of behavioral criteria for self-direction, was collected through the scanner sheets in June, 1971. The 37 selected Language Skills components covered the basic areas of reading, writing, listening, speaking, and typewriting. The criteria for self-direction, formulated by project planners, were derived from a total of 25 specific self-directed behavioral repertoires. Both the completion of language skills components and fulfillment of self-direction criteria were recorded by classroom teachers through a rating scale. For both categories of learning outcomes, the scale values ranged from 1 to 3. In the case of the completion of Language Skills components, the scale values were interpreted as follows:

1 = completed or not needed

2 = in progress

3 = not started

In the case of the fulfillment of self-direction criteria, the scale values were coded as follows:

1 = learner has met criteria

2 = learner is progressing toward the goal

3 = Learner has not demonstrated the behavior

It seems obvious that the scale value of 1 should be the most meaningful and accurate indication of pupils' learning outcomes. This scale value was subsequently used to form the basis on which comparisons were made between the Waiakea and non-Waiakea pupils.

The experimental (Waiakea) children were compared with their control (non-Waiakea) counterparts by grade level. That is, first graders were compared with first graders and kindergarteners were compared with kindergarteners. In addition, both experimental and control samples were subdivided into high and low ability groups on the basis of their IQ scores. The high group consisted of children whose IQ scores were above the grade level IQ mean and the low group comprised of children whose IQ scores were below the mean.

The IQ means for kindergarteners and first graders were established as follows:

Grade Level	N (E + C)	IQ Mean
K	60	105.23
1	60	107.27

The comparable ability subgroups were compared with each other with regard to learning outcomes in Language Skills components and self-direction. Comparisons were made separately for each grade level.

All comparisons were made on the basis of percentages of pupils completing each Language Skills components or meeting a behavioral criteria. These percentages were tabulated in Appendix 44.

For kindergarten pupils, the data showed that in the main, the Waiakea children did better than the non-Waiakea children with regard to the completion of HEP Language Skills components.

Comparisons of the two samples revealed that higher percentages of Waiakea pupils completed nine of the 37 selected components, while higher percentages of completion were computed for the non-Waiakea pupils in seven components. In the rest of the components, the two sample groups did equally well in terms of the percentages of pupils completing the components. The major differences* between the two groups were found in listening (Dialect Markers, English Sounds, Plurals), speaking (Plurals), and typing (Type Big Letters), all differences being in favor of Waiakea children.

When the comparable ability groups were compared with each other, it became clear that the Waiakea gain was due to high IQ pupils, who did better than their non-Waiakea counterparts in 10 components and not as well on six components. The overall performance of low IQ Waiakea pupils was lower than that of low IQ non-Waiakea pupils, with the pupils showing higher achievement in six components and lower achievement in nine components.

With regard to self-direction, the results were in favor of non-Waiakea pupils. The Waiakea kindergarteners were shown to achieve better than their non-Waiakea counterparts in 10 of the 25 behavioral areas. In 13 other areas, however, higher percentages of non-Waiakea children met the behavioral criteria. The two sample groups seemed to differ most remarkably with regard to (a) going from one activity to a second appropriate activity without teacher direction; (b) selecting all activities during one two-hour period without need for teacher direction; (c) reporting all the activities the pupil worked on during a two-hour period; (d) recording program completion; and (e) reporting more than one activity the pupil worked on during the two-hour period. In the first three instances, the differences were in favor of the non-Waiakea children. The differences in the two latter instances were in favor of the Waiakea children.

The performance of high and low IQ Waiakea pupils, as compared with their non-Waiakea counterparts, fell into the same overall pattern. They were both outperformed by the corresponding non-Waiakea sample groups. The low IQ Waiakea pupils achieved higher in 5 self-directed behavioral items, while in 19 other repertoires of self-direction, their achievement was lower than that of the non-Waiakea pupils. By some coincidence, the high IQ Waiakea pupils were also outperformed in 19 behavioral items, while outperforming their non-Waiakea counterparts in 5 others, in most cases, the same strengths and weaknesses were evident as the low IQ Waiakea pupils.

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* A difference equal to or greater than 20 percent was considered as a major difference.

For first graders, the data showed an overall higher achievement of Waiakea children with respect to both completion of components and self-direction. Among the 37 selected language skills components, the Waiakea pupils did better than the non-Waiakea pupils in 17 components in terms of the percentage of pupils completing each component. Only in 8 components did they lag behind the non-Waiakea children. The major differences between the sample groups were found in reading (Instructional Library level 1), listening (Dialect Markers, English Sounds, Plurals, Determiners), speaking (Plurals, Determiners), and typewriting (Type Small Letters). All of the major differences were in favor of Waiakea children. In all cases where the non-Waiakea pupils outperformed the Waiakea pupils, the differences in achievement tended to be negligible.

When the relative achievement of comparable ability groups was determined, it was shown that both high and low IQ Waiakea first graders performed better than their non-Waiakea counterparts, more remarkably so with regard to low IQ children. In a total of 17 components, higher percentages of the low IQ Waiakea pupils completed each of the components as compared with low IQ non-Waiakea pupils. Only in two components was the former outperformed by the latter.

The high IQ Waiakea pupils did better than the high IQ non-Waiakea pupils in 15 components and was outperformed by the latter in only 8 components. With only one exception (out of 17 instances) the major differences, where they existed, were all in favor of Waiakea pupils between comparable ability groups.

The Waiakea first graders as a group also demonstrated a higher level of self-direction as compared with the non-Waiakea first graders. In 20 of the 25 specified behavioral characteristics considered as self-directed in nature, higher percentages of Waiakea first graders were shown to have met the behavioral criteria. Lower percentages of Waiakea pupils were rated as having met the criteria in only three behavioral characteristics. The data also showed that in five of the behavioral areas, major differences occurred between the Waiakea and non-Waiakea sample groups. The five behavioral areas were: (1) the pupils making his own program tag; (2) the pupil locating a tutor when he needs one; (3) the pupil solving problems on his own without going to the teacher; (4) the pupil solving problems with the help of others without going to the teachers; (5) the pupil locating a checker when he needs one. All the major differences, incidentally, favored the Waiakea pupils.

When the first graders were subdivided into high and low IQ groups, it was preeminently evident that the low IQ children benefited most from the learning center setting in terms of achievement in self-direction. The data showed that under the learning center setting, the low IQ Waiakea first graders performed better than their non-Waiakea counterparts in 23 of the pre-specified behavioral areas. In no instances were the former outperformed by the latter in self-direction. Furthermore, in 14 instances, the achievement of the Waiakea sample group was substantially higher than that of the non-Waiakea group, the differences being equal to or greater than 20 percent.

The performance of the high IQ Waiakea first graders, while perhaps not as impressive as that of the low IQ children, also reflected a high level of self-direction. In all, they achieved higher in 13 and lower in 7 of the behavioral areas, when compared with the high IQ non-Waiakea pupils. In five instances, the differences (all favoring the Waiakea sample) between the two sample groups appeared to be substantial.

Thus the data clearly suggest that both kindergarten and first grade pupils using the Waiakea Learning Center completed more Language Skills components by June, 1971 than pupils from other Pilot school HEP classes. In the area of self-direction, the effectiveness of the learning center setting, in terms of pupil achievement, was also confirmed by the performance of Waiakea first graders. Kindergarten pupils appeared to profit less from the learning center setting than from a regular HEP self-contained or 3-on-2 setting. This finding should, however, be viewed in the light of observations made by HEP evaluation specialists during their on-site visitations to the Waiakea Learning Center. These observations, in effect, indicate that many teachers tended to think of kindergarten pupils as young children lacking self-direction and, consequently, tended to unwillingly give them more direction and guidance than was really called for. The end result of this self-fulfilling prophecy was probably reflected in the lower achievement of Waiakea kindergarteners in self-directed behavior. At any rate, it seems reasonable to state by way of summary that ample evidence has been obtained from the scanner data to form the following conclusions:

1. The learning center concept, as exemplified by the Waiakea Learning Center, has been shown to be valid in terms of pupil learning outcomes.

2. HEP pupils of both grade levels (K and 1) using the Waiakea Learning Center achieved better than HEP pupils not using the Learning Center, in terms of the completion of various Language Skills components.

3. While the Waiakea kindergarten pupils seemed to achieve lower than their non-Waiakea counterparts in self-direction, the reverse was true with regard to first graders.

4. There was some evidence that the learning center setting was particularly suited for first grade low IQ pupils, both in terms of attainment of Language Skills components and achievement in self-direction.

5. While the learning center setting appeared to impede rather than facilitate achievement in self-direction of kindergarten pupils, this could be interpreted as a manifestation of teachers' self-fulfilling prophecy about the lack of self-direction of kindergarten pupils.

c. Comparisons Between 1969-70 and 1970-71 Pupils at Waiakea Elementary School

To further examine the effectiveness of the Waiakea Elementary School Learning Center, a second comparative study was conducted, this time on pupils using the center this past year (1970-71) and pupils at Waiakea using the HEP program in 1969-70. The main purpose of this second study was to determine whether or not children using the learning center this past year completed as many language skills components as children at Waiakea using the HEP program the previous year. One of the pre-established criteria of effectiveness was that pupils at the center this past year should complete at least as many language skills components in reading, handwriting, typing, and listening/speaking by June as did HEP pupils at Waiakea last school year (1969-70). Another purpose of the comparative study was to examine the effects of the learning center on pupil self-direction.

The 1969-70 data on pupil achievement and self-direction was obtained from records of data obtained previously, while the data for this past year was made available from the first comparative study (Waiakea, other Pilot school pupils). The raw data was treated in the same manner as in the first study. All of the 1970-71 sample children (32 kindergarteners and 24 first graders) were used. The 1969-70 samples consisted of 54 kindergarten children and 23 first grade children. For the present comparative study only 15 language skills components and 7 specific self-directed classroom behaviors were chosen to form the basis for comparisons. The resulting data were tabulated in Appendix 45.

A perusal of the data revealed that kindergarten pupils using the learning center this past year did almost as well as the non-center children at Waiakea the previous year, in terms of achievement. In five of the 15 selected Language Skills components, higher percentages of center-pupils attained program completion as compared with non-center pupils. In seven other components, the latter had a better program completion record. In the rest of the components there was no difference in achievement, as measured by program completion. It should be noted that in most of the instances where non-center pupils had a better program completion record, the differences between the two groups were very small. In fact, the only major difference* between the two sample groups was found in cursive writing (small letters), favoring the learning center pupils.

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* A difference equal to or greater than 20 percent.

In the main, the learning center pupils demonstrated a higher level of self-direction as compared with non-center pupils. The data showed that higher percentages of learning center pupils met the various criteria for self-direction in five of the seven behavioral items. The major differences between the two sample groups were found in (a) helping other children learn; (b) recording progress completion; (c) selecting all activities during one two-hour period without need for teacher direction; and (d) appraising the pupil's own activities and demonstrating that he has considered the implications for future planning. The differences with respect to the first two items were in favor of learning center children, the latter two favoring their non-center counterparts.

The Waiakea Learning Center first grade pupils this past year seemed to do considerably better than the non-center first graders in 1969-70, in terms of program completions. In seven of the 15 selected components, higher percentages of learning center pupils attained program completion. Only in four components did the non-center pupils outperformed learning center pupils by showing higher percentages of pupils completing the components. The two sample groups differed most conspicuously with respect to (a) Instructional Library level 1; (b) cursive writing (small letters): and (c) typing small letters. The differences were all in favor of learning center pupils. Again, as was the case with kindergarten children, where the non-center pupils seemed to achieve higher, the differences between the center and non-center pupils tended to be negligible.

The learning center first graders were also clearly superior to their non-center counterparts in the area of self-direction. In six of the seven specific behavioral areas, the learning center pupils out-performed the non-center pupils by a considerable margin. In five of the behavioral repertoires included (a) beginning work on an activity after selection; (b) asking teachers for help when the pupil needed it; (c) going from one activity to a second appropriate activity without teacher direction; (d) helping other children to learn; and (e) recording program completion. The non-center pupils were shown to do slightly better in appraising their activities and demonstrating that they have considered the implications for future planning.

It thus seems evident that the learning center setting, as exemplified by the Waiakea Learning Center, is not only conducive to high achievement, but facilitative with respect to the development of self-direction. Two factors should be pointed out in this regard. First, the Learning Center has been designed to provide, among other things, a learning environment in which children have the higher possible availability ratio* of equipment and materials per child, with the expectation that such an arrangement would produce a higher rate of pupil learning. This expectation was clearly borne out by the data. Secondly, the fact that a large group of pupils (one self-contained and one 3-on-2 class) engaged in learning activities at the same time and place in all likelihood makes it imperative for more children at the learning center to, as it were, fend for themselves. In other words, self-direction is not only desirable but a necessary behavioral characteristic in a learning center setting, and hence the higher degree of self-direction attained by learning center pupils as compared with their non-center counterparts.

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* The learning center was equipped to show a 10% increase in the quantity of materials and equipment available per child over the availability of equipment and materials in a self-contained classroom. The Center was used by over 90 children at each session, coming from one self-contained and one three-on-two classroom.

In general, then, the results of the second comparative study, to some extent, confirm the findings made in the first study and, so it follows, to the same extent, support the conclusions drawn in that study. It might be added in passing that the results of both comparative studies should dispel the concern of some teachers that the Learning Center tended to be too crowded and the class size was too large to be managed efficiently. Granting that the Learning Center is economically sound, in terms of the amount of equipment and materials needed and the cost of repairs and maintenance, it would seem reasonable to conclude that the Waiakea Learning Center represents a more viable and effective setting for teaching with the HEP than a regular self-contained or 3-on-2 classroom.

d. Materials and Equipment at the Waiakea Learning Center

Two of the criteria for determining the success of the Waiakea Learning Center had to do with the cost/efficiency of the Learning Center, as compared with an HEP self-contained classroom. Specifically, these were: (1) at least a 10% increase in the quantity of materials and equipment per pupil using the center should exist over the availability in an HEP self-contained classroom, and (2) at least a 35% total reduction in cost of the materials and equipment should occur by housing them in the Learning Cetner, as compared with an HEP self-contained classroom. The present evaluation effort was made to determine if these two criteria had been met.

The evaluation procedures consisted essentially of checking the inventories of the materials and equipment at the Learning Center with those from an HEP self-contained classroom. A per pupil cost analysis was also made for both systems to determine the cost/efficiency of the Center. Data pertaining to the Waiakea Learning Center were collected in May, 1971. Cost data for the self-contained classroom were obtained from a cost-effectiveness study of the HEP Language Skills subprogram, conducted in the Summer and Fall of 1970. It should be noted that as a result of the repair and maintenance problems, not to mention the late delivery of equipment in some cases, some discrepancies (between what was actually available when the inventories were taken and what should have been installed according to the original design of the Learning Center) were found in the inventories of the materials and equipment at the Learning Center. However, in all probability, the data presented in Tables 121 and 122, and in Appendix 46 , represent a close approximation of the true state of affairs.

Table 121: Percentage of Quantity of Materials and Equipment Per Child at the Waiakea Learning Center and an HEP Self-Contained Classroom*

	Waiakea N=90**		Self-Contained N=25	
	No. of Units***	%	No. of Units	%
Materials:				
Reading	71	78.89	49.5	198.00
Typewriting	22	24.44	5.0	20.00
Writing	70	77.78	33.0	132.00
Speaking/Listening	13	14.44	6.0	24.00
Total	176	195.56	93.5	374.00
Equipment:	93	103.33	23.0	92.00

*Percentages were computed by dividing the number of units by the number of pupils.

**As only half of the Waiakea Learning Center pupils (N=180) used the center at any one time, the N size of 90 was used in the computation.

***For a breakdown of the units, see Appendix 46.

The data tabulated in Table 121 clearly show that the self-contained classroom was higher than the Waiakea Learning Center in terms of the percentage of quantity of materials per pupil. Only in one instance (the typing program) was a higher percentage of quantity of materials per pupil computed for the Learning Center, the difference being very small. With regard to equipment, the reverse was true. The data indicate that an 11% increase in the quantity of equipment per pupil using the Center existed over the availability in the self-contained classroom, fulfilling one of the cost/efficiency criteria.

Table 122. Cost Data for the Waiakea Learning Center and an HEP Self-Contained Classroom*

	Waiakea	S.C.
Materials:		
Reading	$2,301.36	$1,243.81
Typewriting	134.20	31.45
Writing	1,010.00	462.42
Speaking/Listening	420.62	201.27
Miscellaneous	95.40	23.60
Total	$3,961.58	$1,962.55
Equipment:	$5,577.13	$1,463.20
Total for Materials and Equipment	$9,538.71	$3,425.75
Number of Pupils	180	25
Per Pupil Costs	$ 52.99	$ 137.03

Note: Total reduction in costs of materials and equipment per pupil at the Waiakea Learning Center was $84.04; percentage of total reduction was 61.34%

* Costs of the various units of materials and equipment, as well as the total costs for the self-contained classroom, were provided by a cost-effectiveness study of the HEP Language Skills program conducted in the Summer and Fall of 1970.

The dollar cost data tabulated in Table 122 indicate that as far as the HEP software was concerned, materials for the reading program constituted the highest cost item. The Writing program ranked second, followed by the Speaking/Listening program. The Typewriting program was shown to be the least expensive.

As expected, the HEP equipment (for all subprograms) turned out to be a big cost item. In the case of the Waiakea Learning Center, the total equipment costs exceeded the total costs of materials. The estimate for per pupil costs for the Waiakea Learning Center was, as expected, much lower than that for the self-contained classroom. The total reduction in costs of materials and equipment per pupil at the Learning Center was computed to be $84.04, representing a saving of about 61%. Thus the second cost/efficiency criteria was more than fully met.

It was obvious that there was an inverse relationship between the percentage of quantity of materials and equipment per child and savings in per pupil costs. An increase in the former would bring about a decrease in the latter, assuming that the number of class sessions remained constant*. By manipulating the two opposing cost factors, one could conceivably come up with an arrangement whereby the two cost/efficiency criteria could both be met. However, the pupil performance data for this past school year (see evaluation report under Pupil Performance) seemed to suggest that the progress of children using the Waiakea Learning Center was in no way hindered by the lower availability of materials and equipment at the Center. The first cost/efficiency criteria, namely, that at least a 10% increase in the quantity of materials and equipment per child using the Center should exist over the availability in a self-contained classroom, would thus appear to be unnecessary.

In summary, the inventory and cost data seemed to point to the following conclusions:

1. The efficiency of the Waiakea Learning Center was fully demonstrated by a 61% total reduction in costs of the materials and equipment, as compared with a regular HEP self-contained classroom. This percentage of saving was higher than the 35% originally anticipated.
2. The criteria of a 10% increase in the quantity of materials and equipment per child using the Center over the availability in a self-contained classroom was not met in the present setting of the Learning Center.

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* It is possible to obtain a higher percentage of quantity of materials and equipment per child and at the same time effect greater savings in per pupil costs by scheduling more class sessions with fewer pupils each.

3. While the 10% increase mentioned in item #2 above could be effected by scheduling more class sessions with fewer pupils each at the Learning Center, the criterion itself did not appear to be particularly pertinent in the light of the superior performances of pupils using the Center this past school year (1970-71).

2. Speeded Reading Subprogram

The Hawaii English Language Skills subprogram includes a Speeded Reading program which is designed to improve the reading speed of children. Although comprehension is an important function in reading, it should be noted that the Speeded Reading subprogram is primarily concerned with increasing reading speed.

In May of 1971, thirty-nine subjects from Kalihi-Uka Elementary School (Field School) were administered a reading test to assess reading speed and reading comprehension. The sample subjects ranged in age from 7 to 11 years and were all in Level 20 or higher in the HEP Instructional Reading Library of the reading program.

The test consisted of two sections: (1) a timed visual reading passage of 1135 words in length, and (2) a non-timed comprehension section on the reading passage (10 items with five multiple choice answer-options per item). Subjects were asked to read the complete passage and then were assigned a word-per-minute (WPM) score for the length of time required to complete the reading of the passage. All ten comprehension items in the second section were then administered and a comprehension (COMP) score was assigned. Each COMP item was equal to one point on the score.

In administering the test, pupils were divided into three subgroups: (1) No-Program, those who had not entered the Speeded Reading subprogram; (2) In-Program, those who had entered but did not complete the Speeded Reading subprogram at the time of the test; and (3) Out-Program, those who had entered and completed the Speeded Reading subprogram.

The analysis on WPM scores indicated significant differences among the three sample groups. Subsequent tests (Scheffe's multiple t's) revealed that the mean score of the Out-Program group (those who had completed the Speeded Reading program) was significantly higher than that of the No-Program group (those who were never in the Speeded Reading program). Other comparisons revealed no significant differences. Table 123 presents the data.

Table 123. Raw Score Means on Words Per Minute

Sample group	No-program	In-program	Out-program
Sample size	7	11	21
Mean	133.28	170.64	200.62
S. D.	43.17	53.21	57.33

F = 4.31 ($p < .05$)

The analysis on COMP (comprehension) revealed no significant differences among the three sample groups at the .05 level. This means that, barring sampling error, the three groups of pupils understood the test materials equally well. Table 124 reports the findings.

Table 124. Raw Score Means on Comprehension

Sample group	No-program	In-program	Out-program
Sample size	7	11	21
Mean	8.29	8.27	7.90
S. D.	1.50	1.19	1.70

F = 0.284 (non-significant)

The data above thus suggest that the Speeded Reading program has fulfilled the objective of significantly improving pupils' reading speed. Furthermore, when compared with the non-program group, the increased speed was achieved without lowering the level of comprehension.

To determine whether reading speed and comprehension were correlated, a correlational study was conducted, using the WPM and COMP scores. The correlation matrices obtained revealed several meaningful significant correlations. Among these, the most conspicuous was between WPM and COMP for the Out-Program group. The negative correlation ($r = -.71$, $p < .01$) suggests that within the Out-Program group, there was a tendency for individual pupils to achieve high on WPM but low on COMP, and vice versa. In other words, within this sample group, pupils tended to try to achieve a higher reading speed at the expense of comprehension. Although (as mentioned in the analysis of variance) the comprehension level of the group as a whole was as high as that of the other two groups, it would seem desirable to try to revert this within group tendency. It would also seem that the objective of the program should stress the importance of individual pupils achieving a higher level of reading speed without lowering their level of comprehension.

The correlation between WPM and COMP for the other two groups was found to be non-significant. It might be noted that the correlation coefficient for the In-Program group (-.34) was, in fact, higher than that for the No-Program group (-.17).

The correlation between I.Q. and the performance variables (WPM and COMP) was non-significant for the combined sample. This means that when the three sample groups were considered together, I.Q. had no effect on their achievement level. However, a high correlation ($r = .99$, $p < .01$) between I.Q. and COMP was computed for the No-Program group. In other words, for the individual pupils in this group, the higher their I.Q. was, the better was their understanding of the test materials.

The significant negative correlation (r = -.51, $p < .05$) between I.Q. and WPM computed for the out-program group suggests that, within this group, low I.Q. pupils tended to read faster (again probably at the expense of comprehension) than high I.Q. pupils, who probably tended to try harder to understand the reading materials.

By way of summary, the findings of this study suggests that the Speeded Reading program is fulfilling its intended purpose of increasing reading rate, and doing so without significant loss in reading comprehension. Further application and research, however, is needed to fully study the effects of this program in the area of reading.

3. Bell & Howell, Electronics Futures, Inc., and the Cassette "Stop-Gap" Programs

In January, 1971, an evaluation of the Hawaii English Audio Reader Card (Bell & Howell and Electronics Futures, Inc.) and the Cassette "Stop-Gap" programs was completed by the HEP evaluation staff. Included in the evaluation were questionnaires to school principals and classroom teachers, a check on the achievement levels of grades K-3 students, and observations of the three machines used to determine the degree of utilization for each of the three different modes of learning. In addition, data on procedures for students using the Stop-Gap Prepositions and Colors and Shapes programs were also collected. The initial delivery and repair/maintenance problems associated with the soft- and hardware of the three modes were also assessed.

It should be noted that only Field and Pilot HEP schools were involved in this evaluation. The findings of this study are as follows:

a. Principals' Questionnaire

Nine Field and Pilot school principals were involved in this portion of the evaluation. Of this total, one had all three learning modes at his school, two had two modes, and the remaining six had only one of the learning modes. One principal did not return the questionnaire.

Principals were asked to rate the effectiveness of the learning mode on student learning, materials used, attitude of teachers, and vendor services. Table 125 shows the distribution of the principals' ratings.

Table 125. Rankings by School Principals on the Effectiveness of the Three Learning Modes (BH-EFI-SG)

		Excellent	Good	Fair	Poor	No Response
Student Learning	BH	3	1	1		
	EFI		1	2		
	SG		1 1*	1		1
Attitude of Teachers	BH	1	2	2		
	EFI		2	1		
	SG		3	1		
Materials Used	BH	1	2	1		1
	EFI			3		
	SG		2	2		
Vendor Services	BH	1	3			
	EFI			2		1
	SG		1	1		1

* One principal responded with a rating between good and fair

When asked whether teachers had registered complaints about the programs, two of the five principals using the Bell & Howell mode indicated that their teachers did. The major complaints related to volume and to tone quality and control. Two of the three principals with EFI programs also listed complaints from teachers--their major concern relating to children erasing programmed audio cards. Three of the four principals with the Stop-Gap programs stated that their teachers had compliants about the program. Their main complaints concerned the difficulties encountered by children with the foot pedal and/or control buttons, the time involved in instructing children the procedures for using the programs, the poor audio-quality, the tangling of the tapes, and the production errors on the tapes. The delay in delivery of the Stop-Gap materials also hampered teacher effectiveness.

There were no major problems with vendors on services for repair and maintenance, although one neighbor island pilot school reported that the time span between shipment and return of the machine for repair was too long.

The results of the principals' questionnaires seem to indicate that school administrators prefer the Bell & Howell Language Master mode of learning in the audio-reader card program. In relation to the effectiveness on student learning, the Bell & Howell mode was ranked highest by the principals. There were no major differences between the ratings of the three modes on the teacher attitude category. However, the EFI was only moderately acceptable in terms of materials used and vendor services.

b. Classroom Teachers' Questionnaire

Thirty-four classroom teachers responded to the questionnaire--13 on the Bell and Howell Language Master, 15 on the EFI, and 6 on the Stop-gap programs. A wide variety of questions was asked of the teachers. Perhaps most significant was where teachers were asked to rate the overall effectiveness of the mode on student learning and their general opinion of the materials. Table 126 presents the results of these two items for all three learning modes.

Table 126. Classroom Teacher Ratings of the BH-EFI-SG Audio Reader Programs

		Excellent	Good	Fair	Poor	No Response
1. How would you rate the overall effectiveness of the modes on student learning?	BH:	3	8	2		
	EFI:	1	12	2		1
	SG:		1	2	3	2
2. What is your general opinion of the materials.	BH:		10	3		
	EFI:	1	10	2		2
	SG:		3	4	1	

Table 127 shows the responses to other questions relating to the three modes of learning.

Table 127. Classroom Teacher Responses to Selected Questions on the BH-EFI-SG Modes of Learning *

	BH			EFI			STOP GAP		
	Yes	No	No Response	Yes	No	No Response	Yes	No	No Response
1. Do you feel that most students learn satisfactorily using the	12	1		15			3	1	2
2. Do most students enjoy using the	10	3		14		1	5	1	
3. Have students complained about the	5	8		7	8		2	4	
4. Have students refused to use the	1	12			15			6	
5. Do you feel it is a good learning device	13			13	1	1	2	2	2
6. Do you know of a better mode	2	10	1	3	9	3	4	1	1
7. Do you have complaints about the	6	7		7	6	2	3	2	1
8. Have your vendor services been satisfactory	7	1	5	3	6	6	1	1	4
9. Were loaners provided when repairs were needed	3	4	6		4	11	1		5
10. Do students have difficulty using the		13			15		3	3	
11. Can students adequately handle the	13			15			5		1
N=	13			15			6		

*Questions reworded for the purpose of this table.

The responses, as indicated in Table 127, show that for all items except 8 and 9, there are no major differences in teachers' opinions between the Bell & Howell and EFI language masters. Both modes appear to be satisfactory as a learning mode and students seem to enjoy both programs, although teachers mentioned problems associated with both. The responses for the Stop-Gap mode, on the other hand, indicate that there were mixed feelings among teachers and students alike about its effectiveness and about the satisfactory utilization of the mode. Comments mentioned most often related to the problems with the foot pedal, tangled tapes, poor lamination of software, poor quality of sound on the tapes, children not following the taped instructions properly, and frustration due to the delay in delivery of the program. Based on these comments and on the responses to questions, it would appear at this point that the stop-gap mode would be the least desirable mode of the three.

The major differences between the Bell & Howell and the EFI modes, as seen on Table 127 relate to student attitudes about the different modes (item 3). Thirty-eight percent of the teachers reported that students had complained about the Bell & Howell mode. For the EFI, on the other hand, about 49% of the teachers using the mode stated that students had registered complaints. The complaints for both modes, as indicated by teachers' comments, related primarily to the audio quality of the software and hardware.

When asked to state their own complaints about the learning mode (item 7) three teachers using the Bell & Howell mode registered complaints related to the audio quality of the software and with headphones. In addition, one stated she would like more soft- and hardware, another indicated problems with the recording button, and the third asked whether she had a choice in the mode used.

Three of the teachers using the EFI mode, on the other hand, complained about the problems associated with the recording button, and two about the volume and/or headsets. Other comments noted elsewhere on the questionnaire included the problem of children erasing and distorting the audio with the recording buttons, children playing with the different buttons on the machine, and poor lamination of software. One teacher remarked that she liked the EFI machine because of its capability without an electrical outlet, while another simply indicated preference for the EFI machine.

It appears that the responses to items 8 and 9 on Table 127 are invalid since some teachers indicated satisfactory vendor service even though the machines were not serviced or repaired.

Interestingly, five of the six teachers using the stop-gap mode responded to item 6 by indicating the Bell & Howell language master as their preference, including the one who did not answer the item.

In addition, one of the 15 teachers using the EFI mode preferred the Bell & Howell mode, another commented that the Bell & Howell enables the learner to free one hand, whereas the EFI requires the use of both hands. Three others preferred the peer-tutoring system. Of teachers using the Bell and Howell mode, one preferred the peer-tutoring system, while another preferred a system built around card stacks.

When asked to add other statements regarding the learning mode, teachers commented that since the materials were installed last year on a pilot basis the software was beginning to fall apart (e.g. tape coming off on cards, booklet pages tearing, etc.). Other comments related to the need for more soft- and hardware, the need for RABC cards to match the card stacks, the need for better organization (e.g. teachers want a list of the cards should they be misplaced or lost), and the need for a better system of checking errors on new programs as they are delivered.

When asked whether the electrical cords on the machines were long enough both the EFI and stop-gap teacher groups responded that they were long enough, whereas five of the 13 Bell and Howell teachers stated that they were not.

To determine whether the machines were scratching desk/table tops, teachers were asked whether this was a problem. The only comments made were that the rubber supports left black marks on table tops.

Teachers were also asked to rate the durability of the soft- and-hardware. The fact that some of the subprograms were installed a year ago must be considered when looking at the responses by teachers. Table 128 shows the results of two questions asked of teachers.

Table 128. Teachers' Ratings of the Durability of BH-EFI-SG Soft- and Hardware

		Very Durable	Adequately Durable	Not Durable	No Response
1. How durable would you rate the machine	BH	4	8		1
	EFI		12		3
	SG	2	4		
2. How durable would you rate the materials	BH		5	7	1
	EFI		11	1	3
	SG		4	1	1

Teachers were also asked to indicate the length of time it took to instruct learners to use the subprograms. In all but one case, teachers responded that it took one week or less. Two teachers remarked that it took only one session to instruct children to use the stop-gap program, while another did not respond to the item.

Finally, teachers using the EFI mode were also asked whether there were major differences between the long and short cards, since size of cards in this mode were unique to the EFI language master. Eleven of the 15 teachers stated there were no major differences between the long and short cards, while four did not respond.

The teachers with the EFI were also asked whether the lower left edges of the cards wore down more readily, since this weakness was detected earlier. Two of the 15 teachers stated their cards were wearing down, whereas seven said no, and six more did not respond.

c. Machine Utilization

A check was made at the five Field and Pilot schools on Oahu to determine the degree of utilization by children using the BH-EFI-SG machines. A total of 19 hours of observation was spent in sixteen classrooms (nine 3-on-2 and ten self-contained). Data collectors were asked to observe only one machine in each room in one hour blocks although there were more than one machine in all but one classroom. Of the sixteen rooms observed, four had both the Bell & Howell and the EFI machines, whereas four had the Bell & Howell and the Stop-gap cassette tape machines. Overall, there were 24 Bell & Howell, 12 EFI, and 7 Stop-gap machines in the sixteen classrooms.

Table 129 below shows the average time spent by grades K-3 students on each machine.

Table 129. Time in Minutes Spent with the BH-EFI-SG Machines by Grades K-3 Students

	Bell & Howell			EFI			Stop-Gap		
	N	Range	Average	N	Range	Average	N	Range	Average
Boys:									
Kindergarten	7	1-5	2.0	3	3-6	5.0	3	5-10	6.66
1st Grade	4	1-5	3.25	3	5-15	11.66	2	10-25	17.50
2nd Grade	9	5-65	17.77	2	5-	5.0			
3rd Grade	7	1-9	4.71				3	5-15	8.33
Girls:									
Kindergarten	4	2-35	15.50				3	5-15	11.66
1st Grade	12	1/2-30	8.45	3	1/2-55	20.16			
2nd Grade	5	1-25	12.20				1	25-	25.0
3rd Grade	9	2-15	6.44						
Totals:	57	1/2-65	8.66	11	1/2-55	10.95	12	5-25	11.66

Table 130 gives a breakdown of the total number of pupils using each machine by grade levels.

Table 130. Number of Children Using the BH-EFI-SG Machines by Grade Level

Grade Levels	BH	EFI	SG
Kindergarten	11	3	6
1st Grade	16	6	2
2nd Grade	14	2	1
3rd Grade	16	0	3
Totals:	57	11	12

The results of this portion of the study seem to indicate that for the Bell & Howell machine almost an equal number of boys and girls used the mode, whereas for the EFI and Stop-gap, boys preferred to use the machines more than girls. The results also seem to indicate that the Bell & Howell mode was more "popular" than the other two modes--not only in terms of the number of pupils using the machine but also in terms of children going to the machine to check errors out. This latter generalization is based on comments made by data collectors and the frequency of short (e.g. 30 seconds-one minute) time intervals spent by pupils at the machine.

d. Achievement Levels

The achievement levels of 82 grades K-3 sample pupils using the three modes (BH, EFI, or SG) were recorded during the first week in January. Of this total, 39 were in three classrooms* using the Bell & Howell mode, 30 were in three classrooms** using the EFI mode, and 13 were in one classroom using the Stop-gap mode. The Stop-Gap classroom also had a set of the Bell & Howell mode. In addition, one of the rooms using the Bell & Howell mode was not using the Prepositions subprogram because it was in the process of being changed. It should be noted further that classrooms using the EFI and Stop-gap modes did not have third graders.

This phase of the evaluation was conducted to determine whether there were significant differences in achievement levels among students using the different modes. Appendix 47 shows the achievement levels of the 82 sample students by grades in the three modes.

In attempting to analyze the results in Appendix 47, it should be noted that several variables influenced the degree of student participation in the various components. One contributing factor was the teacher variable. The degree of participation by pupils in the components was dependent upon the instructional emphasis and methodology of the teacher in teaching the component since the entire HEP program has several options to learning the various language skills. The emphases put upon a component by the teacher determined, to some extent, the number of students who participated in that component. In addition, the teacher may have systematically had students work on one unit at a time rather than permit the child to progress at his own rate.

Another factor would be the personal preferences of pupils. Students could enter components because of preference for component content or because of the learning mode of that component. For instance, in the Reading component a student may prefer to enter the program through the card stack mode rather than the audio reader card or tutoring system modes, since he has the option to do so.

Still another factor was the delay in the delivery of the HEP materials, particularly for the Stop-gap. A larger sample for the Stop-gap group could not be obtained at the time of the implementation of the evaluation design because many classrooms had not received all of the materials.

Finally, the accuracy of the recorded achievement levels attained by sample students was dependent on the degree that teachers had updated their Class Record folders at the time of the data collection. It is only assumed, therefore, that the frequency count shown in Appendix 47 was updated and accurate.

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*One of the classrooms with eleven sample pupils also had the Stop-gap mode.
**One of the classrooms with eight sample pupils had an imcomplete set of EFI materials and a complete set of Bell & Howell materials.

Taking the above variables into consideration, perhaps the only generalization that can be made is that kindergarteners were progressing at a slightly faster rate using the Bell & Howell mode. There appearred to be no major differences between the other grade levels in the various components.

A more sophisticated and structured evaluation design is needed in this area to obtain more useful data.

e. Stop-Gap Colors and Shapes

An attempt was made to obtain feedback for planners on procedures used in the Stop-Gap Colors and Shapes subprogram. A check list of seven questions was developed to determine whether pupils were following the instructional directions properly. Variations were also to be recorded by data collectors.

Four Installation schools with self-contained classrooms were sampled (Fern, Kapalama, Kauluwela, and Linapuni). Of the four, three had instituted the Colors and Shapes program. The fourth did not conduct any instruction in the program for a variety of reasons.

Two of the three classrooms using the Colors and Shapes program used the peer-tutoring system of instruction rather than the Stop-Gap cassette approach. Teacher comments indicated that the problems associated with the Stop-Gap mode "tuned out" both pupil and teachers from the mode. Problems involved machine/software breakdowns; failure of pupils to return cards, thereby creating confusion for others wanting to enter the program; failure and/or difficulty in following taped instructions properly; the need for constant teacher supervision because of the related problems mentioned above; and the difficulties encountered by the learner in concentrating on the instructions and lesson at the same time.

The classroom that did not provide instruction in the Colors and Shapes program had pupils with similar problems on the machine/software and therefore required much teacher supervision. Instead of entering another learning mode, however, the teacher preferred not to enter the subprogram entirely. Informal remarks by the data collectors indicated that another variable influencing this classroom was the lack of teacher and administration support and enthusiasm for HEP.

Only six observations were recorded at the school where the Stop-Gap program was in operation. More observations could not be obtained because of the late delivery of the Stop-Gap materials and because of the need to complete this evaluation report before more could be installed.

Of the six observations, all had some difficulty in following taped instructions. The learners had problems in matching the cassette label with the envelope and/or card label, and often failed to rewind the tape when incorrect responses were given. In addition, the learners often failed to place the cards in "correct" stacks before going on to the next instruction on the tape. Instead the learners placed the cards with the other cards that needed to be checked.

Other comments noted by the data collectors included the restlessness of the children, commenting that the tape appeared to be too long. The failure of the learner to stop the tape when instructed to do so was another problem with most learners. One data collector noted further that one learner became frustrated and simply walked away, while another student left during the middle of the lesson.

f. Stop-Gap Prepositions

An evaluation was conducted at three different schools on the Stop-Gap Prepositions program. Two were Installation schools, while the third was a Pilot school. A total of 24 observations was obtained from four self-contained classrooms.

The results of the evaluation was basically the same as in the Colors and Shapes study. A seven-question checklist was developed to obtain feedback on procedural problems along with variations from the taped instructions.

Of the 24 sample students, 13 failed to follow the taped instructions properly more than once (in most cases several mistakes were noted), six made at least one mistake, four made no mistakes, and one did not attempt to enter the lesson after encountering difficulty with the tape and foot pedal.

The problems encountered by the pupils, as noted by the data collector, were similar to those encountered in the Colors and Shapes program. Many of the children failed to stop the tape as instructed and therefore fell behind the taped lesson. In addition, many had difficulty with assembling and checking for the correct cards--the confusions, in part, were due to previous learners failing to return cards into their proper places. Many of the learners had difficulty with the foot pedal and tapes--it was difficult for them to coordinate the foot pedal and at the same time concentrate on the lesson at hand.

The nature of the classroom organization also appeared to handicap the learners in using the stop-gap mode. Being in a self-contained situation, the teacher was unable to provide adequate instruction and supervision on complex modes such as in the Stop-Gap and therefore the pupils had difficulty in adjustment and in correcting errors in procedures.

g. Soft-/Hardware Delivery Capabilities

A survey of 10% of the HEP 3-on-2 and self-contained Installation school classrooms was conducted in January, 1971, to determine the extent of reported defective materials. Six installation classrooms in each of the four Oahu school districts were involved. Table 131 gives a breakdown of the number of schools surveyed by learning mode (BH, EFI, or SG).

Table 131. Classrooms Involved in the BH-EFI-SG Survey for Defective Materials

District	BH		EFI		SG		Total
	3-on-2	SC	3-on-2	SC	3-on-2	SC	
Honolulu	2	1			1	2	6
Central	3	3					6
Leeward	1		2	1	1	1	6
Windward	1				3	2	6
Totals:	7	4	2	1	5	5	24
Total number classrooms*	99	34	9	9	23	76	250

*Each classroom received one set of materials in the installation package

Table 131 shows that the Bell & Howell materials were installed in approximately 53% of the Installation classrooms, EFI in about 7%, and Stop-Gap in about 40%.

Table 132 gives a breakdown of the degree of damaged/missing items for each element using the BH, EFI, and SG materials. Damages reported included edges of cards being worn, tapes peeling from cards, etc. It should also be noted that frequencies reported for items in sets denote only that part of the set was damaged/worn.

It can readily be seen that the greatest percentage of defects occurred in classrooms using the EFI and BH modes. Combining the defects of all three modes, and comparing them with the total installation implementation, there was a defect rate of approximately 6% with the audio reader/stop-gap materials.

Table 132. Reported Defects/Damages of Specific Materials in the BH-EFI-SG Audio-Reader Programs

	Damaged			Missing		
	BH	EFI	SG	BH	EFI	SG
Reading						
LM Audio Cards (Words on Tape)-(set)						
Sect. 1 LM/BL Audio Cards-(set)					1	
Sect. 2 LM/SL Audio Cards-(set)						
Sect. 3 LM/N1 Audio Cards-(set)						
Plastic Container RABC	1			1		2
LM RABC Audio Cards-(set)						
LM RABC Envelopes-(set)						
Handwriting						
Chart 1 (8 pockets):	1		1			2
Letter Recognition LM Audio Cards (Cursive SL and BL)-(set)	1					1
Chart 2 (8 pockets):	1		1			1
Letter Recognition LM Audio Cards (Print and Cursive forms)-(set)	1					
Aural/Oral						
Colors C 4 1/2" Audio Cards-(set)					1	
Shapes S 4 1/2" Audio Cards-(set)	1				1	
Colors and Shapes 4 1/2" Audio Cards-(set)	1				1	
Colors Diagnostic 9" Audio Cards-(set)					1	
Shapes Diagnostic 9" Audio Cards-(set)					1	
DM 4 1/2" Audio Cards-(set)	1					
DM 14" Audio Cards-(set)	1			1		
English 4 1/2" Audio Cards-(set)	2					1
English 14" Audio Cards-(set)	1					
Plurals 4 1/2" Audio Cards-(set)	1					
Plurals 9" Audio Cards-(set)						
Prepositions: Audio Cards (9") 87 per set					1	1
Language Master Machines						
Totals	14 10%		2 <1%	2 <1%	7 38%	8 8%

Table 133 provides information in the delivery capabilities between Bell & Howell and Electronic Futures, Inc.

Table 133. Delivery Schedules of BH and EFI Materials/Equipment

	Contract Award	Initial Delivery Schedule	Revised Delivery Schedule	Actual Delivery	No. of Days Late
BH Software	05/13/70	08/15/70	09/05-09/12/70	10/28/70	46
EFI Software	07/06/70	08/15/70	09/15-09/20/70	12/01/70	73
EFI Hardware	05/27/70	08/01/70	09/01/70	08/25/70	0

The data above clearly shows that although both vendors were late in delivery, Bell & Howell presented the lesser problem in terms of delivery.

Based on the foregoing findings, the following conclusions were drawn:

1. The Stop-Gap appeared to be the least desirable of the three learning modes, as indicated by teacher personal preferences and opinions.

   The results of questionnaires from principals and classroom teachers indicated that the children were having difficulty in operating the equipment and in following directions requested in the procedures. Furthermore, the instructional and supervisory time required of teachers with the mode was more demanding than with the other two modes.

2. There were no major differences among classroom teachers in terms of preference between the Bell & Howell and the EFI learning modes. Both modes appeared to be satisfactorily accepted by teachers.

   The opinions of teachers, obtained through questionnaires, showed that both modes were considered effective in relation to student learning. However, the results seemed to indicate a more favorable opinion toward the Bell & Howell mode.

3. School principals seemed to prefer the Bell & Howell as a mode of learning in terms of student learning, materials used, and vendor services.

   This point was borne out through results of questionnaires requested of principals. The Bell & Howell mode was ranked the highest in all four of the categories listed. In addition, the EFI was ranked as only "fair" in relation to materials used and vendor services.

4. The major problems associated with the Bell & Howell mode seemed to be the quality of sound, whereas the problems associated with the Stop-Gap involved operational and instructional procedures. The problems relating to the EFI mode involved the audio quality of the software and difficulty in keeping children from manipulating the record buttons.

    These points are based on comments made on the questionnaires, and through observations by data collectors when obtaining feedback for planners.

5. The Bell & Howell mode appeared to be the most popular with both boys and girls, although the lack of sufficient EFI machines in classrooms observed may have been an influencing factor.

    Observations of children using the three machines in 16 classrooms indicated that the Bell & Howell machine was used the most by an almost equal number of boys and girls. The results also showed that boys seemed to prefer the EFI and Stop-Gap more than girls, although the number is considerably less than preference for the Bell & Howell machine.

6. There were no major differences in the rate and level of achievement among pupils using the three modes of learning.

    A survey of 82 grades K-3 pupils using the three modes showed that the rate of achievement and the levels attained were fairly even regardless of the mode used. Only the kindergarteners seemed to have progressed at a slightly faster rate with the Bell & Howell mode. The difficulty in obtaining more precise data was due to the varying classroom organizations--where, in many instances, more than one mode was used in the classrooms.

7. The degree of defects/damages encountered with the software of the three modes appeared to be very minor--approximately 6% overall were reported damaged or missing.

    A survey of 10% of the 3-on-2 and self-contained classrooms in Installation schools, conducted in January, 1971, showed that only about 6% were of a defective nature. The Bell & Howell had the larger percentage of damaged items, although the frequencies by items were minimal. The EFI, on the other hand, had the greater percentage of missing items--again with frequencies at a minimal rate.

8. The Bell & Howell delivery capabilities appeared to be much better when compared to the EFI, although both modes were delivered late to schools.

    The revised and actual delivery dates completed for both modes revealed that the Bell & Howell software was delivered 46 days late, whereas the EFI materials were 62 days late. EFI hardware was delivered 90 days late. No new Bell & Howell Hardware was purchased this school year.

4. Teacher Questionnaire, Purposeful Writing, Level B, Subprogram

In May, 1971, classroom teachers from 25 classes were selected from among ten Field and Pilot schools to complete an HEP-developed questionnaire on the Purposeful Writing, Level B, subprogram. The survey was conducted to obtain information relative to the writing program to improve the Level B program activities. (See Appendix 48 for list of schools and classes selected for the survey.)

In the initial item on the questionnaire, teachers were asked to indicate the number of children who had entered the program (Level B). Of the 19 teachers who returned the questionnaire, only eight reported that no pupils had entered the program. The other 11 teachers reported that a total of 61 pupils had entered the Level B subprogram at the time of the survey. Of this total, 4 were first graders, 25 were second graders, and 32 were third graders. The range of time students had used the program was between half-a-month to over seven months.

Two major points were suggested from the results described above. First, since the Level B subprogram is an advanced level activity in the Purposeful Writing subprogram, the entry of first and second graders into the Level B activities suggest that pupils in the Field and Pilot schools were progressing at a fairly rapid pace. Secondly, the range of students in the program (first through third graders) and the range of time in participating in the Level B activities significantly support the individualized nature of the Language Skills program. This latter generalization is supported further by the data in the following table:

Table 134. Distribution of Pupils Completing the Various Activity Cards in the Purposeful Writing, Level B, Subprogram

Card Number	No. of Pupils Completing the Activity Cards
1-10	42
11-20	25
21-30	19
31-40	14
41-50	11
51-60	8
61-70	7
71-80	5
81-90	3
91-100	3
101-110	3
111-120	1

The data in the foregoing table shows a wide dispersion of pupils completing the various activity cards in the program.

To determine whether the learning procedures developed for the program were adequate, teachers were asked to indicate whether their pupils were having difficulty in following the prescribed procedures. Of the eleven teachers responding, ten reported that pupils had no difficulty in following the learning procedures. Only one teacher reported that her children had some difficulty. The difficulties encountered by pupils pertained to the letter-writing portion of the program. The problem was resolved by referring pupils back to the Level A program.

Further observations from teachers indicated that pupils had encountered difficulty with only a very small portion of the activity cards. One class unit listed cards #11, 21, 22, and 52 as "difficult". It was pointed out that the word "join" in the directions for card #11 was ambiguous to pupils. Some pupils, for example, "joined" v to w by "writing them together" (vw). Others "joined" them by drawing a curve between them (v‿w). Also, there were no letters on the back of the card.

Another teacher indicated that some pupils had difficulty with the letter writing procedures in card #105. It was also suggested that pupils be given more directions on letter forms in cards #104 and 114. One class unit said that the only time pupils sought help was when they questioned the "validity" of the activity cards--the answers on the cards were said to be usually misprinted.

It was also reported that pupils had difficulty with the word recognition task on card #20. One teacher said that lights had to be turned off to enable pupils to do the counting task in card #7. Card #10 was said to be incomplete--there were no numbers on the back.

The overall conclusion relative to the Purposeful Writing, Level B, subprogram, based on the findings of this survey, is that the program was developed to meet the needs of most pupils. Progress and achievement in the program appeared to be at a rate sufficiently adequate for most students and children appeared to have little difficulty in following the learning procedures required.

5. Learning Outcomes in Terms of Completion of Language Skills Components

In line with the current trend toward criterion-reference evaluation, the 1970-71 HEP evaluation efforts included a comprehensive tabulation of data pertaining to pupil progress in the various Language Skills components. Special Scanner sheets were designed by the HCC evaluation staff and distributed to classroom teachers for recording pupil progress data from all Field and Pilot school children in the HEP program, and from all sample pupils used in the outcome evaluation. A total of 37 Language Skills components were included in the study. Pupil progress data in terms of program completion* by June 1971 were reflected for a total of 3,076 grades K-3 pupils. This sample consisted of 1,052 kindergarteners, 939 first graders, 613 second graders, and 472 third graders. A further breakdown of the sample by school type and sex is presented in Appendix 49.

A perusal of the data reported in Appendix 49 showed that the general trend of the learning outcomes was consistent with what would normally be expected. Virtually all pupils, or the predominant majority of them, completed the lower level components during the school year. Higher grade level pupils completed more components than lower grade level pupils. On the other hand, some less expected results were also found. A simple tabulation (see Table 135) indicated that for most of the components, higher percentages of Field school pupils attained program completion than Installation or Pilot school pupils. Specifically, at the kindergarten level, Field school pupils did better than Installation pupils in 20 instances and performed less well in 12 instances. They also showed better performance in 23 Language Skills components as compared with Pilot school pupils. The latter did better in only six components.

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* Pupils who did not need a particular Language Skills component were considered as having completed the component.

Table 135. Comparison of School Types with Regard to Completion of Language Skills Components*

Grade Level	Comparison**
Kindergarten	Installation (12) vs. Field (20 Field (23) vs. Pilot (6) Installation (19) vs. Pilot (11)
First Grade	Installation (8) vs. Field (24) Field (18) vs. Pilot (18) Installation (7) vs. Pilot (26)
Second Grade	Field (28) vs. Pilot (5)
Third Grade	Field (20) vs. Pilot (14)

The Installation school pupils, in turn, achieved better than Pilot school pupils, the former outperforming the latter in 19 instances. The Pilot school pupils, on the other hand, were shown to do better than the Installation pupils in 11 instances.

At the first grade level, the Field and Pilot school pupils seemed to achieve equally well while outperforming the Installation pupils on 24 and 26 occasions respectively. The Installation school pupils were shown to be superior to the Field and Pilot school pupils in eight and seven instances respectively.

At the second grade level, the Field school pupils had a better record of program completion for 28 Language Skills components when compared with their Pilot school counterparts. The latter were shown to do better in five components.

At the third grade level, the Field school pupils were ahead of their Pilot school counterparts in 20 instances, while lagging behind the latter on 14 occasions.

The superiority of the Field school pupils was in a way not entirely unexpected. The HEP Field schools, as compared with Installation and Pilot schools, had had more experience with the program and in all probability were better equipped than the other two school types both in terms of teacher efficiency and the installation of HEP materials and equipment.

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* Based on a total of 37 components

** Number in parentheses indicates the number of components in which the school type was favored.

Another conspicuous trend was found in sex difference (see Table 136). The data showed that girls consistently achieved higher than boys across all grade levels and school types included in the study. Moreover, the differences in percentage in most cases appeared to be quite substantial. While the sex differences were hard to explain within the context of the HEP program, the psychological literature, on the other hand, has offered evidence suggesting that girls reach a comparable level of maturation earlier than boys. Whether or not the higher achievement of girls using the HEP Language Skills program was due to their early maturation (a term shunned by many as a psychological non-entity) could only be a moot point in the present study. The true state of affairs should be determined by more research and evaluation studies.

Table 136. Sex Differences with Regard to Completion of Language Skills Components*

Grade	School Type	Comparison**
Kindergarten	Installation	Boys (5) vs. Girls (17)
	Field	Boys (5) vs. Girls (23)
	Pilot	Boys (11) vs. Girls (21)
First	Installation	Boys (3) vs. Girls (22)
	Field	Boys (4) vs. Girls (32)
	Pilot	Boys (5) vs. Girls (26)
Second	Field	Boys (5) vs. Girls (28)
	Pilot	Boys (4) vs. Girls (32)
Third	Field	Boys (12) vs. Girls (22)
	Pilot	Boys (5) vs. Girls (30)

* Based on a total of 37 components

** Number in parentheses indicates the number of components in which the sex group was favored.

A more important purpose of the present study was to compare the pupils progress data for this past school year with that for the 1969-70 school year. The evaluation effort in this respect was confronted with a small problem; namely, most of the 1967-70 and 1970-71 Language Skills components were not entirely comparable or equivalent to each other. In all, only 12 components were found to be highly equivalent. Comparisons of pupil performance were subsequently limited to these 12 components. The relevant data are presented in Table 137.

Table 137. Comparison of Percentages of Pupils Completing or Not Needing the Various Language Skills Components* During the 1969-70 and 1970-71 School Year

Grade Level/Language Skills Components	1969-70 F	1969-70 P	1970-71 F	1970-71 P
Kindergarten				
1. Discriminate between words	99	96	97	95
2. Copy a paragraph from a reader	5	20	3	1
3. Copy words accurately	43	22	13	9
4. Type large and small letters from a model with correct fingering	27	21	20	6
First Grade				
5. Copy numbers, large and small letters accurately in cursive form	87	59	68	61
6. Type sentences and paragraphs	11	3	13	4
7. Type big and small letters	82	25	56	29
8. Type big letters	66	23	82	59
Second Grade				
9. Read over 50 books	47		45	
10. Read over 3 books	81		87	
11. Write a message or letter requiring another to perform a task	7		11	
12. Copy individual words accurately in cursive	89		72	

* Most of the 1969-70 and 1970-71 components differed in some respect from each other. Only the highly equivalent ones are reported in this table.

Overall, the 1970-71 pupils seemed to do as well as the 1969-70 pupils in terms of program completion. However, when the performance data was examined by grade level, the 1970-71 kindergarten pupils of both Field and Pilot schools had a lower level of achievement as compared with their 1969-70 counterparts. This was true with regard to all four components reported in Table 137. The 1970-71 first graders seemed to be ahead of their 1969-70 counterparts. It was particularly so in the case of Pilot school pupils who outperformed their counterparts in all four components. No consistent differences were found between the second grade pupils of the two school years.

In the evaluation of the HEP for the 1969-70 school year, certain projections were made with regard to learning outcomes. It was projected*, for instance, that by the end of the school year the top 5% of the kindergarten pupils would have read over 10 books. In addition they would be able to copy a paragraph from a reader accurately in cursive form and type large and small letters from a mode. The bottom 5%, on the other hand, should be able to discriminate between words. Similar projections were made for first and second grade pupils. In the light of these projections, the performance of the 1970-71 pupils appeard to generally meet expectations. At the kindergarten level, for instance, 7-9% (for different school types) of the pupils had read over 14 books during the school year. Approximately 5-20% of the pupils were able to type small letters and 19-56% were able to type big letters. The data also showed that 95-97% of the kindergarteners were able to virtually discriminate between words. On the less positive side, only 1-3% were found to be able to copy a paragraph from a reader accurately in cursive form.

For the first graders, it was projected that the top 5% would have read over 40 books and be able to type sentences and paragraphs. Half of the pupils (50%) were expected to have read over 10 books and be able to type big and small letters from a model. The bottom 5% were expected to be able to copy numbers, large and small letters accurately in cursive form, and type big letters. Results of the present study showed that 8-13% of the 1970-71 first grade pupils had read over 49 books and 1-13% were able to type sentences and paragraphs. Very close to one-half (48-49%) had read over four books, while 32-37% had read over 14 books. Approximately 16-56% of the pupils were able to type small letters and 41-82% of the pupils were able to type big letters. About 45-68% of the pupils were able to copy large and small letters accurately in cursive form.

The criteria projected for the second graders were that the top 5% of the pupils would have read over 100 books and be able to write a message or letter requiring another to perform a task; that one-half of the pupils (50%) would have read over 50 books; and that the bottom 5% would have read over 3 books and be able to copy individual words accurately in cursive. The 1970-71 performance data showed that approximately 21% of the second graders had read over 94 books and about 5% had read over 114 books. About 12% of the pupils were shown to be able to write a message or letter requiring another to perform a task. At the lower performance levels, 40-45% of the pupils had read over 49 books; 79-87% had read over 4 books; and 57-72% were able to copy individual words accurately in cursive.

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* Only projections relevant to data collected in the present study are reported.

In looking at the differences in performance between the 1969-70 and 1970-71 pupils, and the discrepancies between the projected performance and the actual 1970-71 pupil achievement, two factors should be borne in mind. First, as has been indicated earlier, the Language Skills components for the two school years were in most cases not identical or equivalent to one another. In making comparisons of achievement for the two school years, only the identical or highly equivalent components were used. These components, as would be expected, constituted only a small portion of the entire HEP Language Skills program. In comparing the actual 1970-71 pupil performance with the projected criteria, the problem of equivalency was side-stepped by reporting the criteria and the actual performances separately. It will be noted that in many instances, the two measures did not represent the same level of achievement.

Secondly, the installation of HEP during the 1970-71 school year was confronted with the problem of late delivery of materials and equipment. This, as has been pointed out earlier, might very well have had a retardatory effect on pupils' achievement.

In conclusion, the data obtained from the scanner sheets seemed to suggest the following:

1. The HEP Field school pupils seemed to do better than the Installation and Pilot school pupils in terms of completing the various Language Skills components during the past school year (1970-71). The better performance of the Field school pupils may partially be accounted for by the fact that Field schools had had more experience with the HEP program than the other two school types.

2. Female pupils using the Language Skills program appeared to achieve considerably higher than their male counterparts in terms of program completion during the past school year (1970-71).

3. Overall, there seemed to be no consistent differences between the performance of the 1970-71 pupils and that of the 1969-70 pupils in terms of completing the various Language Skills components.

4. Based on the available data, it was difficult to determine the extent to which the 1970-71 pupil performance had conformed with the projected criteria.

5. The results of the present study should be taken into account in future evaluation efforts aimed at establishing performance-criteria norms for the HEP pupils.

C. Evaluation of the HEP Equipment Capabilities and Repair/Maintenance Problems

1. Teacher Questionnaires

As a part of the on-going evaluation of the Hawaii English Program, questionnaires relating to the equipment (hardware) used in the program were sent to selected Field and Pilot school classroom teachers in February, 1971. Questionnaires were sent to five Pilot schools on Oahu and one on Kauai, and to one Field school on Molokai. (See Appendix 50 for listing of schools and classrooms involved)

The purposes of this assessment were to (1) determine the delivery capabilities of vendors, and (2) collect data for future bid specifications. Separate questionnaires were developed for five different pieces of equipment: cassette tape player and recorder, headset, electric typewriter, sound bar, and power bar. The evaluations of other equipment used in the HEP program (e.g. film loop projector) were conducted through separate studies.

Seventeen classroom teachers from the seven sample schools responded to the various questionnaires. Teachers from both the 3-on-2 and self-contained classrooms were represented, eleven from Oahu and six from the neighbor islands. The results of the questionnaires are described below.

a. Cassette Tape Player and Recorder

Relating to the bid requirement of picking up defective equipment for repair and replacement within 24 hours after a service request was made, three of the eleven Oahu teachers reported a total of 22 occasions when the vendor failed to respond as specified in the contract. In addition, vendors on Oahu were required to replace and return defective equipment within three working days. Five of the eleven teachers reported that this requirement was not met. The average number of days the defective equipment was at the vendors for repair was 14 days.

On the neighbor islands, bids required vendors to replace or repair and return defective equipment within six working days after a service request was made. Three of the six neighbor island teachers reported that vendors failed to live up to the contract specifications. One of the teachers further reported that the defective equipment was "out" for approximately 2-3 weeks.

When asked if the repair service was satisfactory, however, six of the total 17 teachers responded positively and three negatively. Eight teachers did not respond at all.

On the electrical aspects of the cassette tape machine, the teachers responded as follows:

1. Sixteen of 17 teachers reported that the machine had the required five-foot or longer power cord. One teacher did not respond.

2. Four teachers stated that the power cords had a grounding plug, while eleven reported negatively. Two gave no response.

3. Thirteen teachers reported that the speaker would cut off when the headsets were plugged in. Four teachers stated that their machines did not have this function.

4. Six teachers stated that their machines had speakers that could be cut off by a separate switch. Nine stated otherwise, and two did not respond.

5. Fourteen teachers reported that the microphone on their machines had a control switch, one stated the opposite, and two did not respond.

6. All 17 teachers reported that their machines did not have a pilot light to indicate that the power was on.

The responses to the mechanical aspects of the machine were as follows:

1. Fifteen teachers said that the cassette tapes would eject when the covers were opened, while one indicated otherwise. One teacher did not respond.

2. Ten teachers reported the tapes could also be ejected by a function key. Six teachers reported otherwise and one did not respond.

3. All 17 teachers reported that the machines had both the fast-forward and fast-rewind controls, and that there were no instances in which the tape burned in the machine.

4. Fifteen teachers said that their machines had protective cases made of metal or high impact plastic, while two did not respond.

5. Nine teachers reported that their machines had rubber or soft plastic feet, while six stated otherwise. Two teachers did not respond.

6. Thirteen teachers reported instances in which the tapes became tangled in their machines, while three reported no such instances. One teacher failed to respond.

When asked whether they thought the cassette tape machine should have a record function, six responded positively and eight negatively. Three teachers failed to respond. In a related question, teachers were asked whether the program could function with only a playback function. Fourteen responded positively, one negatively, and two did not respond.

In another section of the questionnaire, the teachers were asked to rate the seriousness of the problems they had encountered when using the cassette tape machine for the various HEP program components. Their ratings clearly suggest that only a small minority of the teachers felt that the cassette tape machine presented problems in relation to the effective use of HEP program components. An average (averaged across 13 program components) of less than one teacher stated that the problems were "many", and an average of about two teachers indicated that there were "some" problems. The rest of the teachers felt that there were "very little" or no problems. Except for the "Taped Books" component, where an average of four teachers described the problems as "many" or "some," the teachers' ratings were more or less evenly distributed over the various components.

On the question of the effectiveness of the cassette tape machine as a learning mode for the various program components, the teachers seemed hesitant in voicing their opinions. When the ratings were averaged across components, the data showed that: (1) an average of one teacher rated the effect as "excellent"; (2) an average of one teacher rated the effect as "good"; (3) an average of one teacher rated the effect as "fair"; and (4) an average of less than one teacher rates the effect as "poor". The predominant majority of the teachers did not respond to the question. Except for the "Taped Books" component, where the effect of the machine was described as "excellent" and "good" by three and five teachers respectively, and the "Dialect Markers" and "Sounds of English" components, where four teachers rated the effect as "poor", the ratings were evenly distributed across the various components. (See Appendix 51 for detailed tally of responses)

Finally, the following additional comments were made relating to the cassette tape machine:

1. Tapes were damaged or ruined due to tangling in the machine.
2. Failure of the machine to wind smoothly and frequent breaking of the cassette cover (reported by one teacher).
3. Much repair work needed--often having more than one machine out of order at a time (reported by one teacher).
4. Suggestion for a battery-operated machine designed with a recharge system, or alternatively, that HCC supply schools with batteries (reported by one teacher).
5. Problem of having to replay most or the entire tape in order to relearn a particular word.

b. Headset

Of the eleven teachers on Oahu, only one reported that the vendor failed to provide repair service according to the terms of the contract. In the one particular case, the vendor failed to pick up defective equipment for repair or replacement within the 24 hours required in the contract. Eight of the teachers reported no such problems, and two did not respond to the question.

One of the 11 Oahu teachers also reported that defective headsets were not replaced or repaired and returned within the specified three working days. Two of the six outer-island teachers similarly reported that defective headsets were not replaced or repaired and returned within the required six working days. One outer island teacher further reported that the defective equipment was not returned for 2-3 weeks. The other four teachers reported no such instances had occurred at their schools.

Seven of the total 17 teachers felt that their repair services had been satisfactory, while four felt otherwise. Six did not respond to the question.

On the mechanical aspects of the headsets, twelve teachers felt that the cushions on the headsets were suitable for use by children. Five complained that the cushions fell off too easily. These five teachers added that some of the children complained of ears hurting after using the headset for half an hour or more.

Fourteen teachers described the earphones as being durable. Two teachers, however, reported that the cord broke easily. One teacher did not respond to the item.

Fifteen of the teachers reported that the power cord was of the required six to eight foot length. Two stated otherwise.

Sixteen teachers further reported that the strain relief was provided at the earcups as required, while one teacher failed to respond to the question.

Fourteen teachers indicated that the headsets were adjustable for head size, as required, while one teacher pointed out that it was difficult for pupils to adjust the sets. Two others stated that their headsets were not adjustable.

Of the many sets in the sample schools, ten headsets were reported to have needed repairs. Of these, six needed repair one time and four needed repair two times. One teacher reported further that one headset was stretched and expanded out of shape and therefore created problems for pupils with smaller heads.

Additional comments by teachers included:

1. Preference for connecting wires to be of the coiled type rather than straight or uncoiled wires. Two teachers maintained that the coiled wires were easier to untangle and that there were less chances for the coiled wires to get in the way of the language master cards.

2. Jacks became loose and therefore caused breaks in the audio connections.

3. Adjustment mechanisms jammed and prevented them from being returned into the slots.

4. Teachers had difficulty in bending the metal portion to prevent the adjustment mechanism from slipping down.

5. Problems created by twisting of earpieces.

6. Need for teachers to adjust (bend) the metal portion of the earphones to fit pupils' heads.

7. Wires on the headset were too long.

One teacher expressed concern for contagious diseases (e.g. ear infections) spreading through the use of earphones. On the other hand, another teacher reported no problems encountered with the headsets and was quite pleased with its effectiveness in the learning process.

c. Electric Typewriter (SCM Model 250 or Equivalent)

Of the eleven Oahu classroom teachers, only one stated that the vendor failed to pick up defective equipment for repair or replacement within 24 hours as specified in the contract. Eight indicated no problems, while two did not respond to the question. At the one school where the vendor failed to live up to his contract obligations, the teacher reported that there were two such occurrences.

None of the Oahu teachers reported problems with the contract requirement of replacing or repairing and returning defective typewriters within three working days, although only nine responded to the question.

For the neighbor islands, two of the six teachers reported that vendors failed to replace and return defective equipment within six working days after a service request was made. The other four indicated no such problems.

To the question of whether the repair service was satisfactory, 14 of the teachers responded positively, while three failed to respond to the item. None responded negatively to the item.

When asked to list the number of typewriters needing repair work, eleven out of the 17 classes reported needing repair services at one time or another. Six classes reported no problems at all. Of the classes needing repair services, five machines needed repair work at least one time, four two times, four three times, and one more than five times. It should be noted, however, that in two classes where no repair was needed, the materials arrived late and therefore the program was not being used for too long a period at the time of the survey.

In a related question, teachers were asked to indicate the number of typewriters needing repairs once only or chronically, as opposed to the number requiring factory modifications. Eight machines were reported to be in need of repairs once and eight chronically. None was reported as needing factory modifications.

Additional comments by the teachers included:

1. Need for teachers to be instructed in handling simple repair work (reported by one class)

2. The typewriters in one class were of two different models. The Type Check book did not apply to one machine and therefore teachers were forced to make their own changes in the book.

3. Two classes reported receiving the equipment early but without the software and therefore the responses to the survey questions were not true indicators of the problems encountered with the typewriter. (Both classes reported no problems to all items)

d. Sound Bar

Generally speaking, it appears that the sound bars delivered to schools met bid specifications. For example, all 17 teachers reported that the equipment had the one input jack and from four to six output jacks. In addition, 14 teachers stated that their equipment were working properly--that is, the audio was being transmitted through the power bar on to the headsets. Two responded negatively and one teacher did not respond to the item.

On the other hand, only six of the 17 teachers reported that their equipment had soft rubber or plastic feet underneath, whereas eleven reported their equipment did not have this requirement. In addition, only 10 teachers felt that their equipment was made of corrosion-resistant material, while five indicated otherwise and two did not respond.

e. Power Bar

Two questions were asked relating to the power bars. To the question on whether the power bar had push-to-reset circuit breakers, nine teachers reported positively, four negatively, and four did not respond.

To the question on whether the power bar had 15 foot or longer cords, eleven answered positively, two negatively, and four did not respond.

Based on the findings relative to the five different hardware used with the HEP program, the following conclusions have been drawn:

1. Defects with the various equipment used for the Hawaii English Program were numerous. However, none of them appeared to be serious enough to warrant drastic modifications of the equipment.

2. It appeared that vendors were not meeting all of the bid requirements in terms of repair services to the schools (particularly on neighbor islands). On the whole, however, the services were satisfactory.

3. The majority of classroom teachers did not feel that the recording function on the cassette tape machine was necessary for use with the various subprograms.

4. Generally, the classroom teachers did not encounter too many problems with the cassette tape machines for the 13 subprogram components using the equipment. The majority of teachers did not respond to items relating to this portion in the survey. The failure of teachers to respond was taken to indicate that teachers were not having problems with the machine. The only exception was with items relating to the Taped Books subprogram, where an average of four teachers described the problems as "many" or "some."

5. Although teachers indicated that the Taped Books program encountered the most problems with the cassette tape machine, it was rated "excellent" and "good" most frequently in terms of effectiveness as a learning mode.

6. The Stop-gap subprograms, particularly the Plurals, Dialect Markers, and Sounds of English subprograms, had the poorest ratings in terms of effectiveness as a learning mode with the cassette tape machine.

7. The majority of teachers did not respond to items relating to the effectiveness of the subprograms using the cassette tape machine (items #4 and 5 above). This, in part, was because classrooms surveyed did not have all of the subprograms (e.g. Stop-gap), and/or because some of the program materials were delayed in delivery, at the time of the survey.

8. Generally the headsets did not present major problems. The main complaints pertained to the cushions on the earcups. Complaints expressed by teachers dealt with mechanical adjustments and/or durability problems.

9. About two-thirds of the 17 classrooms surveyed required repair services on their typewriters. In the majority of cases, repair services were required more than once on the same machines.

10. It appears that the sound bars generally met bid specifications. The major flaw was the failure of the vendors, in

many instances, to provide rubber or plastic feet (base) for the equipment.

11. The power bars presented no major problems, although the vendors failed to provide circuit breaking switches and/or 15-foot (or longer) cords in some instances.

12. The minor yet numerous problems encountered with the various equipment may have been due, in part, to the wear-and-tear of over one and a half years of utilization. The sample schools/classes were all Field and Pilot and therefore had had HEP since at least 1969-70.

13. Delays in delivery of the HEP equipment/materials to schools hampered the gathering of data for this study.

14. The findings from this survey relating to the effectiveness of the equipment as a learning mode are too meager (because of the relatively short period of time in which the equipment and related programs had been in use at the time of the survey) to support any conclusive statements at this time. The majority of teachers were unwilling to respond to items related to this aspect.

APPENDICES

APPENDIX 1

Description of Field and Pilot Schools Participating in the Hawaii English Program

School	Field School (FS) or Pilot School (PS)	Location	Percentage of Children Receiving Public Welfare	Type of School Area
Kahului	PS	Maui	2.6	Harbor community; sugar & pineapple plantations
Kalihi-Uka	FS	Honolulu	8.2	Residential
Kaunakakai	FS	Molokai	1.8	Agriculture & town area
Kapaa	PS	Kauai	12.0	Agriculture
Kilohana	FS	Molokai	4.3	Agriculture, ranching, fishing
Kualapuu	FS	Molokai	1.6	Agriculture
Makaha	PS	Leeward Oahu	33.3	Beach fronts, small business, residential
Maunaloa	FS	Molokai	3.2	Agriculture
Puohala	PS	Windward Oahu	5.1	Residential, small business
Shafter	PS	Central Oahu	0	Army military post
University Laboratory	FS	Honolulu	8.0	University and business community
Waiakea	PS	Hawaii	11.5	Residential

APPENDIX 2

Reliability and Validity of Instruments Used in the Evaluation Study

A. California Test of Mental Maturity:

The 1957 edition manuals report that for the total score, the single grade reliability coefficients were all above .90. For the language score, single grade reliabilities range from .80 to .95, with a median of .89; for the non-language score, the range is .83 to .96, median being .91. Validity: one study is cited in which the CTMM correlated .88 with Stanford-Binet. The claim is made that other studies have yielded even higher values.

B. Cooperative Primary Listening Test:

The internal consistency coefficients, computed by means of Kuder-Richardson formula 20 and alternative form correlations are as follows:

Grade	Order of Testing	Alternative Form Correlation	Internal Consistency Coefficient	
			Form A	Form B
2	A - B	.82	.86	.82
	B - A	.75	.85	.80
3	A - B	.76	.76	.74
	B - A	.72	.77	.76

Validity: The handbook recommends that each test user make an individual judgment of "Content Validity" with respect to his own instructional objectives.

C. Gates-MacGinitie Reading Tests:

The Technical Manual reports the following reliability coefficients:

Grade	Sub-test Score	Alternate Form Reliability	Split-Half Reliability
1	Vocabulary	.86	.91
	Comprehension	.83	.94
2	Vocabulary	.87	.93
	Comprehension	.81	.93
3	Vocabulary	.85	.89
	Comprehension	.87	.91

Readiness Skills (for kindergarten children) is said to have median reliability coefficients ranging from .63 - .87 for the subtests.

No data on validity are reported.

D. Kuhlmann - Anderson Test:

The technical manual reports the following:

Reliability:

Test-retest Reliability Coefficients

Grade	Reliability
Kindergarten	.85
First	.87

Add-even Score Reliability Coefficients
(Corrected by Spearman-Brown formula)

Grade	Reliability
Kindergarten	.95
First	.93

Validity: The manual claims that the validity of the Sixth Edition tests (which in one instance was reported to be .84) was built into the Seventh Edition tests. Evidence of construct, concurrent, and predictive validity of the Seventh Edition tests is found in the correlations of test scores with the results of the Sixth Edition tests, with those of other recognized tests of mental ability, of readiness and of academic achievement. These correlation coefficients range from .55 to .84.

E. Self-Concept and Motivation Inventory:

No data on reliability and validity are reported for grades 1-3. For the kindergarten from, a reliability coefficient of .79 is reported for the "Self-Concept" section of the inventory.

APPENDIX 3

Detailed List of HEP Software Delivery Schedule

Program Unit	3-on-2 Delivery Date*	3-on-2 Days Late	Self-Contained Delivery Date*	Self-Contained Days Late
Reading:				
Tapes	9/ 8/70		9/ 8/70	
RWC 2	9/20/70		12/ 9/70	16
RWC 4	"		"	10
RWC 5	"		"	10
PC 2	"		"	
Diag	9/28/70		12/ 9/70	
BL	10/20/70		"	
RWC 8	"		"	
RWC 12	"		"	
RWC 17	"		"	
RWC 18	"		"	21
SL	11/18/70		12/ 9/70	
SL-A	"		"	
N1	"		"	
RWC 9	"		"	
RWC 10	"		"	
RWC 11	"		"	
RWC 14	"		"	
RWC 16	"		"	
CC1	"		"	
CC2	"		"	
CC3	"		"	
Flap Stack Bases	"		"	18
YN1	9/20/70	13	12/ 9/70	73
YN2	"	13	"	73
YN3	"	13	"	73
RWC 1	"	13	"	73
RWC 3	"	13	"	73
PC 1	"	13	"	43
Taped Books	"	13	10/20/70	
SRA Pad	"	13	8/ 4/70	
BL-A	10/20/70	43	12/ 9/70	73
RWC 7	"	44	"	73
LM Books	"	44	10/20/70	
RABC (C)	11/18/70	32	11/18/70	32
P + S (C)	"	32	"	22
N1-A	"	73	12/ 9/70	73
RWC 6	"	73	"	73
RWC 13	"	73	"	73
RWC 15	"	73	"	73
Pras. + Sent.	"	73	11/18/70	22

APPENDIX 3 (continued): Detailed List of HEP Software Delivery Schedule

Program Unit	3-on-2 Delivery Date*	3-on-2 Days Late	Self-Contained Delivery Date*	Self-Contained Days Late
Writing:				
Ex. Bk.	8/ 4/70		8/ 4/70	
C-Bk 2	"		10/20/70	
C-Bk 3	"		"	
C-Bk 5	"		"	
FL #'s	9/20/70		11/18/70	45
FL Cur	"		"	
FL MW	"		"	
Film Loop	"		12/ 9/70	21
Cursive Cards	10/20/70		10/20/70	
N-Bk 1	9/ 8/70	1	11/18/70	22
C-Bk 4	"	1	10/20/70	
M-Bk 2	"	1	11/18/70	22
M-Bk 3	"	1	"	22
M-Bk 4	"	1	"	22
8mm Bk	"	1	9/ 8/70	
Writ. Par.	10/20/70	41	11/18/70	22
CLD Bk 1	"	43	10/20/70	
CLD Bk 2	"	43	"	
CLD Bk 3	"	43	"	
Listening/Speaking:				
C + S	9/ 8/70		11/18/70	22
C + S	9/20/70		11/18/70	
PL	"		11/ 9/70	39
Plur	"		"	22
DM	10/20/70		11/ 9/70	
E	"		"	
DM	"	3	"	22
E	"	3	"	22
Wood. Blk	"	70	"	13
Typewriting:				
Type BL 2	9/20/70		9/20/70	
Type SL	9/20/70		9/20/70	
Type Check	"	13	"	
Type BL 1	"	13	"	
Type L and W	"	13	"	
BLSLN 1	11/ 9/70	23	11/ 9/70	23

* Delivery dates refer to delivery of materials to Honolulu by vendors. Delivery to schools generally took another 2-3 weeks.

APPENDIX 4

Actual Distribution of HEP Materials

Program	No. of Individual Units in Installation Package*	Percentage of Total Installation Package
Reading	16,089	34.03%
Handwriting	10,656	22.54%
Aural/Oral	9,060	19.16%
Typewriting	1,880	3.98%
Stop-gap	2,430	5.14%
Equipment	7,162	15.15%
Total:	47,277	

* Figures are based on all HEP classes. This includes 133 3-on-2 and 110 self-contained classrooms. The figures do not include the varying individual items in a set (e.g. 26 cards in the flock cards set). Since the survey covered 10% of the classes, the figures were first divided by 10 before they were used as denominators in the calculation of the various percentages of defective materials in Tables 1-5.

APPENDIX 5

Instructions for Demographic Data Sheet

I. GENERAL

A. Type or print neatly.

B. Do not fill in shaded areas.

C. Fill in all data as of Friday, September 4. You will be able to make changes and additions later.

D. Return the sheets to your installation teacher not later than Wednesday, September 9.

II. SPECIFIC (See Demographic Data Form)

(1) Fill in the name of your district.
(2) Fill in the name of your school.
(3) Fill in the full name of each teacher (all three if this is a 3-on-2 class). Please include designation as Mr., Miss, or Mrs.
(4) Fill in room number where class is to be taught. If there is also a building designation, please include it.
(5) Fill in the time period when class will study HEP materials.
(6) Check which mode the classroom has.
(7) Number students. If more than one page of students is needed, continue the numbering on the second and succeeding pages (do not begin over).
(8) Record the name of each student in the class. List all students alphabetically by last name (do not separate students by sex or grade). List last name first, followed by first name and middle initial.
(9) Record each student's sex as "m" or "f".
(10) Record each student's grade level as "K", "1", "2", "3", or "4".
(11) Record the number of years each student has been in the HEP including this year.
(12) Record the I.Q. score and the test on which that score was obtained for each student. If the test was the same for all students, ditto marks are acceptable. If no score is available for a student, draw a line through the box for that student.
(13) Record the educational level of the head of the household (the father or, if the father is not present in the home, the mother or guardian) using the following code system:

CODE	EDUCATIONAL LEVEL
1	Graduate Professional Training (doctor, lawyer, etc.)
2	College Graduation (from a 4-year college)
3	Partial College Training (at least one year of college or business school beyond high school)

APPENDIX 5 (continued): Instructions for Demographic Data Sheet

CODE	EDUCATIONAL LEVEL
4	High School Graduate
5	Partial High School (completed grade 10 or 11)
6	Junior High School (completed 7th, 8th, or 9th grade)
7	Less than Seven Years of School (all others)

Each person should be coded at the highest level (lowest number) for which he qualifies.

(14) Write the occupation of the head of each family. Be as specific as you can. For example, write "electrician" or "hair dresser" rather than "technician" or "laborer".

(15) Under "Remarks", put an "L" if the child has a language problem (does not speak English). Mark a "D" if the child has a disability (hard of hearing, emotionally disturbed). Mark a "T" if the child is to be excluded for DOE testing purposes. If the child has some other problem which would substantially affect his school performance, write it in. Otherwise, leave this area blank.

APPENDIX 5 (continued): Instructions for Demographic Data Sheet

Demographic Data Sheet

(1) ______________ DISTRICT (2) ______________ SCHOOL

(3) ______________ TEACHER(S)

(4) __________ ROOM # (5) From ________ To ________ CLASSTIME

(6) Audio Card Reader (LM) _____ (SG) _____ (EFI) _____

F P I C

K 1 2 3

SC 3/2 Page ___ of ___

(7) #	(8) NAME Last, First Middle	(9) Sex	(10) Gr.	(11) Years in HEP	(12) IQ		HEAD OF HOUSEHOLD		SES	(15) Remarks
					Score	Test	(13) Ed.*	(14) Occupation		

APPENDIX 6

List of Sample Schools and Classes for the 1970-71 HEP Evaluation Study

Installation Schools

District	Schools	No. of Classes & Type of Class Org.		Grade Combination From Which Selection is to be Made	No. of Students to be Selected
Honolulu	Jefferson	1	3-on-2	K-1	12
	Kahala	1	S.C.	K	10
	Kapalama	1	3-on-2	K-1	12
	Liholiho	1	S.C.	K	10
	Lincoln	1	3-on-2	K-1	12
	Manoa	1	S.C.	K	10
	Pauoa	1	S.C.	K	10
	Puuhale	1	3-on-2	K-1	12
	Wilson	1	S.C.	K	10
	Kamiloiki	1	3-on-2	K-1	12
Central	Kaala	1	3-on-2	K-1	12
		1	S.C.	K	10
	Red Hill	1	3-on-2	K-1	12
	Scott	1	S.C.	K	10
	Wheeler	1	S.C.	K	10
	Salt Lake	1	3-on-2	K-3	12
Leeward	Nanaikapono	1	3-on-2	K-1	12
	Palisades	1	S.C.	K	10
	Lehua	1	S.C.	K	10
	Manana	1	3-on-2	K-1	12
Windward	Kainalu	1	S.C.	K-1	10
	Kapunahala	1	3-on-2	K-1	12
	Pope	1	S.C.	K-1	10
	Waimanalo	1	3-on-2	K-1	12

APPENDIX 6 (continued): List of Sample Schools and Classes for the 1970-71 HEP Evaluation Study

District	Schools	No. of Classes & Type of Class Org.		Grade Combination From Which Selection is to be Made	No. of Students to be Selected
Hawaii	Kapiolani	1	3-on-2	K-1	12
	Laupahoehoe	1	S.C.	K-1	10
	Waimea	1	S.C.	K	10
	Kealekehe	1	3-on-2	K-1	12
Maui	Lanai	1	3-on-2	K-1	12
	Paia	1	S.C.	K-1	10
	Wailuku	1	3-on-2	K-1	12
		1	3-on-2	K-1	10
Kauai	Kaumakani	1	3-on-2	K-1	12
	Koloa	1	S.C.	K	10
	Wilcox	1	3-on-2	K-1	12
		1	S.C.	K	10
Total		36			396

S.C.=Self-contained

APPENDIX 6 (continued): List of Sample Schools and Classes for the 1970-71 HEP Evaluation Study

Field Schools

District	Schools	No. of Classes & Type of Class Org.		Grade Combination From Which Selection is to be Made	No. of Students to be Selected
Honolulu	Kalihi-Uka	1	3-on-2	K-2 (Mrs. Nagato)	15
		1	3-on-2	3 (Mrs. Nishimura)	15
		1	S.C.	K-2 (Miss Murakami)	15
Molokai	Kualapuu	1	3-on-2	K-1	15
		1	3-on-2	K-3	20
		1	3-on-2	2-3	15
Total		6			95

Note: Sample students at Kalihi-Uka are to be selected only from Mrs. Nagato's 3-on-2 K-2 and Miss Murakami's self-contained K-2 classes, and from the 90-plus students in the team-teaching 3rd grade classes that Mrs. Nishimura works with.

S.C.=Self-contained

APPENDIX 6 (continued): List of Sample Schools and Classes for the 1970-71 HEP Evaluation Study

Pilot Schools

District*	Schools	No. of Classes & Type of Class Org.		Grade Combination From Which Selection is to be Made	No. of Students To be Selected
Central	Shafter	1	3-on-2	K-3	12
		1	S.C.	K-2	12
Windward	Puohala	1	3-on-2	K-1	12
		1	S.C.	K	12
		1	S.C.	1	12
Leeward	Makaha	1	3-on-2	K-2	12
		1	S.C.	K-2	12
Maui	Kahului	1	3-on-2	K-1	12
Kauai	Kapaa	1	3-on-2	K-1	12
		1	3-on-2	2-3	12
Totals		10			120

*Honolulu and Hawaii Districts are not represented because of their unique situations.

APPENDIX 6 (continued): List of Sample Schools and Classes for the 1970-71 HEP Evaluation Study

Control Schools

District	Schools	No. Students to be Selected by Grade Levels & Class Organization 3-on-2	S.C.	Total No. of Students	Classes from Which Selection is to be Made** 3-on-2	S.C.
Honolulu	Kauluwela	K - 15 1 - 15		30	K-1	
	Hahaione	2 - 20 3 - 15	K - 10 1 - 10	55	2-3	K 1
Central	Pearl Harbor	K - 20 1 - 20 2 - 20 3 - 15	K - 10 1 - 10 2 - 10 3 - 10	115	K-1 2-3	K 1 2 3
Leeward	August Ahrens		K - 10 1 - 10 2 - 10	30		K 1 2
Windward	Enchanted Lakes	K - 20 1 - 20		40	K-1	
	Kailua		K - 10 1 - 10	20		K 1
Hawaii	Waiakeawaena		K - 10 1 - 10	20		K 1
Maui	Makawao		K - 10 1 - 10	20		K 1
Kauai	Waimea	1 - 15		15	1-2	
	Koloa		K - 10 1 - 10	20		K 1
Totals		195	170	365		

* It was not possible to obtain a sample of non-HEP control 3-on-2 students from each District. Molokai was not involved in the sampling for control students since all K-3 students in Molokai are involved in HEP.

** Classes indicated must be the one from which the sample group is to be selected. Example: Hahaione must submit the lists of both the grade 2 class and the grade 2-3 combination class in order for HEP to select the appropriate 2nd and 3rd grade sample groups.

APPENDIX 7

1970-71 HEP Evaluation Study Control School Sampling Description

The schools listed below were selected from each District to serve as the control schools for the 1970-71 HEP Evaluation Study. The criteria for their selection is based on the following:

1. The California Reading Test results, administered to 2nd graders in April, 1970, were compiled to produce a District-by-District Total Mean percentage score.

2. Selection of the school(s) in each District was made by ranking each school by Total percentage score and then comparing the School Total Mean percentage score with the District Total Mean percentage score.

3. Constraints for the selection included:

   a. Schools with non-HEP 3-on-2 classes

   b. Schools with non-HEP self-contained classes

   c. Schools with grade levels corresponding to the grade levels used in the experimental classes

   d. Schools with an appropriate number of students

4. Schools meeting all of the constraint requirements and coming closest to the District mean score were selected to be the control schools and as being representative of the District.

5. Schools for the Leeward, Hawaii, and Maui Districts, and for grades 2 and 3 in Kauai District, did not meet all of the constraints and therefore none were selected for the 3-on-2 control groups. Grade level sample size in control schools in the other Districts was increased to obtain the appropriate sample size.

APPENDIX 7 (continued): 1970-71 HEP Evaluation Study Control School Sampling Description

Data on Control Schools for 1970-71 HEP Evaluation Study

District	Schools	3-on-2 Grades Comb.	S.C. Grades	Grade 2 CRT School Mean	Grade 2 Sample Size	Grade 2 CRT District Mean	Grade 2 District Size
Honolulu	Kauluwela			62%		69%	44,066
	Hahaione	1: K-1 2: 2-3	1: K-1; 3 2: K; 2; 2-3 3: 1	73%	115		
Central	Pearl Harbor	2: K-1 2: 2-3	1: 1-2 2: K-1; 2-3 3: 2 4: K; 3 5: 1	66%	174	66%	2,770
Leeward	August Ahrens		1: K-1; 2-3 6: 3 7: K; 2 8: 1	62%	268	58%	2,813
Windward	Enchanted Lakes	2: K-1 1: 1-2 2: 2-3		66%	157	66%	2,328
	Kailua		1: K-1; 2-3 4: K 5: 1; 2; 3	66%	139		
Hawaii	Waiakea-waena		1: K-1; 1-2; 2-3 2: 1 3: K; 2; 3	69%	129	66%	1,329
Maui	Makawao	1: K-1 2: 2-3	2: K; 1 3: 3	62%	84	66%	920
Kauai	Waimea	2: 1-2		58%	52	66%	565
	Koloa		1: 1; 1-2; 2 2: K; 3	66%			

State Total Mean Percentage Score: 66%; grade 2 size: 14,791
Publishers Norm Total Mean Percentage Score: 50%; grade 2 sample size: 1,216

APPENDIX 8

Total Mental Factors IQ Mean of Sample Schools on the California Test of Mental Maturity

N	IQ Mean	%*	School	District	Type of School	N	IQ Mean	%*	School	District	Type of School
94	118	90	Kahala	Honolulu	I	90	103	58	Kahului	Maui	P
160	112	82	Manoa	Honolulu	I	155	102	58	Wailuku	Maui	I
88	111	82	Wilson	Honolulu	I	78	102	58	Shafter	Central	P
126	109	76	Enchanted Lake	Windward	C	39	101	58	Waimea	Hawaii	I
132	109	76	Hahaione	Honolulu	C	137	101	58	Kailua	Windward	C
127	108	73	Manana	Leeward	I	63	100	54	Koloa	Kauai	I,C**
258	107	69	Palisades	Leeward	I	134	100	54	Kapaa	Kauai	P
188	197	69	Kainalu	Windward	I	48	100	54	Waimea	Kauai	C
143	107	69	Kapunahala	Windward	I	112	99	54	Wilcox	Kauai	I
143	107	69	Puohala	Windward	P	97	99	54	Makawao	Maui	C
114	106	69	Waiakea-waena	Hawaii	C	102	99	50	Kapiolani	Hawaii	I
155	106	66	Kapalama	Honolulu	I	62	99	50	Kealakehe	Hawaii	I
105	106	66	Lincoln	Honolulu	I	80	98	50	Kauluwela	Honolulu	C
105	105	69	Kaala	Central	I	37	97	46	Laupahoehoe	Hawaii	I
69	105	69	Salt Lake	Central	I	311	97	46	August Ahrens	Leeward	C
54	105	66	Kamiloiki	Honolulu	I	89	96	42	Pope	Windward	I
119	105	62	Pauoa	Honolulu	I	78	95	46	Waimanalo	Windward	I
126	104	66	Jefferson	Honolulu	I	12	95	42	Paia	Maui	I
128	104	66	Wheeler	Central	I	98	94	42	Puuhale	Honolulu	I
24	104	66	Kaumakani	Kauai	I	130	94	42	Makaha	Leeward	P
93	104	62	Liholiho	Honolulu	I	213	93	42	Nanaikapono	Leeward	I
66	103	62	Red Hill	Central	I	39	92	42	Kualapuu	Maui	F
154	103	62	Lehua	Leeward	I	106	91	38	Kalihi-Uka	Honolulu	F
191	103	62	Pearl Harbor	Central	C	50	89	34	Lanai	Maui	I
166	103	58	Scott	Central	I						

Publisher's Mean: 100 State Mean: 102

Key:
I = Installation School
P = Pilot School
F = Field School
C = Control School

* Percentiles based on national norms

** One self-contained class was selected as a sample experimental class and two self-contained classes were selected as control classrooms

APPENDIX 9

List of Data Collectors and Sample Schools for April/May Post-test Schedule 1970-71 HEP Evaluation Study

	Data Collector	School(s) Assigned To
1.	Mrs. Felicia Wong	Hahaione
2.	Mrs. Mavis Motooka[1]	Kauluwela
3.	Mrs. Winifred Naganuma	Liholiho & Jefferson
4.	Mrs. Jean Weiss[2]	Pauoa & Lincoln
5.	Mrs. Shirley Wong	Wilson & Kahala
6.	Mrs. Margaret Amano[3]	Kapalama
7.	Miss June Yasuda[4]	Manoa
8.	Miss Valerie Tom[5]	Puuhale
9.	Miss Gail Souza[2,4,5]	Kamiloiki
10.	Mrs. Marlene Arelliana[3] & Mrs. Ruth Fujioka[3]	Kalihi-Uka
11.	Mrs. Barbara Lankford	Kaala
12.	Mrs. Shilling Law	Pearl Harbor
13.	Mrs. Judith Birt	Red Hill & Salt Lake
14.	Mrs. Yvonne Gomes	Alvah Scott
15.	Mrs. Anara Grabowski	Shafter
16.	Mrs. Ellene Phillips	Wheeler
17.	Mrs. Shirley Oshiro	August Ahrens
18.	Mrs. Gretchen Clatworthy	Lehua
19.	Mrs. Dorothy Badua[3]	Makaha & Nanaikapono
20.	Mrs. Laverne Tanaka[6]	Manana & Palisades
21.	Mrs. Grace Inouye[2]	Kapunahala
22.	Mrs. Kimie Higashiyama[2]	Enchanted Lakes
23.	Mrs. Kay Nakata[2]	Puohala
24.	Mrs. Jane Poentis[2]	Kailua & Kainalu
25.	Mrs. Wanda Aina[2]	Pope & Waimanalo
26.	Mrs. Sharon Yanazaki[6]	Kapiolani & Waiakeawaena
27.	Mrs. Dorothy Auna	Kealekehe
28.	Mrs. Emiko Muraoka[1]	Laupahoehoe
29.	Mrs. Cheryl Spock[2]	Waimea (Hawaii)
30.	Mrs. Beverly Warzacha[2]	Makawao
31.	Mrs. Mary Weizer[2]	Paia
32.	Mrs. Danielle Jo[2]	Wailuku & Kahului
33.	Mrs. Florence Aki[2]	Lanai
34.	Mrs. Sato Nakao[7]	Kaumakani & Waimea (Kauai)
35.	Mrs. Barbara Bryan	Koloa
36.	Mrs. Sheila Lee[2]	Wilcox
37.	Mrs. Grace Tokioka[2]	Kapaa
38.	Mrs. Lorraine Pescaia	Kualapuu

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[1] Teacher aides under Title III.
[2] Substitute teachers.
[3] Previous experience as data collectors for HEP (Field and Pilot schools).
[4] University students employed as data collectors for HEP evaluation department.
[5] University graduate students with elementary practice teaching experience.
[6] DOE teachers on maternity leave.
[7] Retired teacher from DOE.

APPENDIX 10

Achievement Gain of HEP and Non-HEP Pupils on Reading Diagnostic Stack

Subprograms	School Type	Pretest		Posttest		Percentage of Students Not Needing Subprograms at End of Year*
		No. of Students	Percentage of Students Needing	No. of Students	Percentage of Students Needing	
Kindergarten:						
N1	Field	21	95.2	16	75.0	20.2
	Pilot	38	94.7	35	51.4	43.3
	Inst.	244	89.7	219	39.7	50.0
	Total HEP	303	90.7	270	43.3	47.4
	Control	117	96.5	95	71.5	25.0
BL	Field	21	95.2	16	50.0	45.2
	Pilot	38	89.4	35	51.4	38.0
	Inst.	244	77.4	219	33.3	44.1
	Total HEP	303	80.1	270	36.6	43.5
	Conrol	117	84.7	95	46.3	38.4
YN1	Field	21	66.6	16	6.2	60.4
	Pilot	38	18.4	35	2.8	15.6
	Inst.	244	27.0	219	2.2	24.8
	Total HEP	303	28.7	270	2.5	26.2
	Control	117	38.4	95	4.2	34.2
SL	Field	21	95.2	16	56.2	39.0
	Pilot	38	94.7	35	62.8	31.9
	Inst.	244	88.9	219	45.2	43.7
	Total HEP	303	90.0	270	48.1	41.9
	Control	117	95.7	95	72.6	23.1
YN2	Field	21	80.9	16	31.2	49.7
	Pilot	38	52.6	35	11.4	41.2
	Inst.	244	63.9	219	9.1	54.8
	Total HEP	303	63.6	270	10.7	52.9
	Control	117	69.2	95	27.3	41.9

APPENDIX 10 (continued): Achievement Gain of HEP and Non-HEP Pupils on Reading Diagnostic Stack

		Pretest		Posttest		Percentage of Students Not Needing Subprograms at End of Year*
Subprograms	School Type	No. of Students	Percentage of Students Needing	No. of Students	Percentage of Students Needing	
Kindergarten:						
W	Field	21	100.0	16	93.7	14.3
	Pilot	38	100.0	35	85.7	14.3
	Inst.	243	97.9	219	75.7	22.2
	Total HEP	302	98.6	270	78.1	20.5
	Control	117	100.0	95	86.3	13.7
PC	Field	21	95.2	16	68.7	26.5
	Pilot	38	100.0	35	51.4	48.6
	Inst.	243	97.5	219	32.4	65.1
	Total HEP	302	97.6	270	37.0	60.6
	Control	117	98.2	95	68.4	29.8
YN3	Field	21	95.2	16	55.6	39.6
	Pilot	38	73.6	35	31.4	42.2
	Inst.	243	87.2	219	20.0	67.2
	Total HEP	302	86.0	270	23.7	62.3
	Control	117	91.4	95	48.4	43.0
Instructional Library 1	Field	21	100.0	16	93.7	6.3
	Pilot	38	100.0	35	85.7	14.3
	Inst.	244	98.7	219	82.6	16.1
	Total HEP	303	99.0	270	83.7	15.3
	Control	117	100.0	95	91.5	8.5
Instructional Library 2	Field	21	100.0	16	93.7	6.3
	Pilot	38	100.0	35	85.7	14.3
	Inst.	244	99.5	219	86.7	12.8
	Total HEP	303	99.6	270	87.0	12.6
	Control	117	100.0	95	95.7	4.3

APPENDIX 10 (continued): Achievement Gain of HEP and Non-HEP Pupils on Reading Diagnostic Stack

Subprograms	School Type	Pretest		Posttest		Percentage of Students Not Needing Subprograms at End of Year*
		No. of Students	Percentage of Students Needing	No. of Students	Percentage of Students Needing	
Kindergarten:						
Instructional Library 4	Field	21	100.0	16	93.7	6.3
	Pilot	38	100.0	35	91.4	8.6
	Inst.	244	99.5	219	90.8	8.7
	Total HEP	303	99.6	270	91.1	8.5
	Control	117	100.0	95	97.8	2.2
Instructional Library 7	Field	21	100.0	16	93.7	6.3
	Pilot	38	100.0	35	97.1	2.9
	Inst.	244	100.0	219	93.6	6.4
	Total HEP	303	100.0	270	94.0	6.0
	Control	117	100.0	95	98.9	1.1
Instructional Library 10	Field	21	100.0	16	100.0	0.0
	Pilot	38	100.0	35	97.1	2.9
	Inst.	244	100.0	219	95.4	4.6
	Total HEP	303	100.0	270	95.9	4.1
	Control	117	100.0	95	98.9	1.1
First Grade:						
NI	Field	18	35.3	18	44.4	(-11.1)**
	Pilot	42	45.2	39	12.8	32.4
	Inst.	102	62.7	98	16.3	46.4
	Total HEP	162	59.9	155	18.7	36.2
	Control	111	68.4	92	17.3	51.1
BL	Field	18	27.7	18	11.1	16.6
	Pilot	42	30.9	39	20.5	10.4
	Inst.	102	42.1	98	8.1	34.0
	Total HEP	162	37.6	155	11.6	26.0
	Control	111	45.0	92	8.6	36.4

APPENDIX 10 (continued): Achievement Gain of HEP and Non-HEP Pupils on Reading Diagnostic Stack

Subprograms	School Type	Pretest No. of Students	Pretest Percentage of Students Needing	Posttest No. of Students	Posttest Percentage of Students Needing	Percentage of Students Not Needing Subprograms at End of Year*
First Grade:						
YN1	Field	18	5.5	18	0.0	5.5
	Pilot	42	9.5	39	5.1	4.4
	Inst.	102	1.9	98	0.0	1.9
	Total HEP	162	4.3	155	1.2	3.1
	Control	111	2.7	92	0.0	2.7
SL	Field	18	38.8	18	33.3	5.5
	Pilot	42	42.8	39	35.8	7.0
	Inst.	102	62.7	98	23.4	39.3
	Total HEP	162	54.9	155	27.7	27.2
	Control	111	65.7	92	29.5	36.2
YN2	Field	18	5.5	18	5.5	0.0
	Pilot	42	11.9	39	7.6	4.3
	Inst.	102	22.5	98	8.1	14.4
	Total HEP	162	17.9	155	7.7	10.2
	Control	111	16.2	92	1.0	15.2
W	Field	18	94.4	18	66.6	27.8
	Pilot	42	64.2	39	58.9	5.3
	Inst.	102	88.2	98	44.4	43.8
	Total HEP	162	82.7	155	50.9	31.8
	Control	111	90.0	92	54.3	35.7
PC	Field	18	38.8	18	27.7	11.1
	Pilot	42	50.0	39	23.0	27.0
	Inst.	102	82.3	98	10.2	72.1
	Total HEP	162	69.1	155	15.4	53.7
	Control	111	77.4	92	30.4	47.0

APPENDIX 10 (continued): Achievement Gain of HEP and Non-HEP Pupils on Reading Diagnostic Stack

		Pretest		Posttest		Percentage of Students Not Needing Subprograms at End of Year*
Subprograms	School Type	No. of Students	Percentage of Students Needing	No. of Students	Percentage of Students Needing	
First Grade:						
YN3	Field	18	5.5	18	11.1	(-5.6)**
	Pilot	42	19.0	39	15.3	3.7
	Inst.	102	57.8	98	10.2	47.6
	Total HEP	162	41.9	155	11.6	30.3
	Control	111	54.9	92	7.6	47.3
Instructional Library 1	Field	18	61.1	18	55.5	5.6
	Pilot	42	76.1	39	66.6	9.5
	Inst.	103	57.8	98	48.9	45.2
	Total HEP	163	41.9	155	54.1	40.9
	Control	111	54.9	92	63.0	32.4
Instructional Library 2	Field	18	100.0	18	66.6	33.4
	Pilot	42	92.8	39	66.6	26.2
	Inst.	103	96.1	98	57.1	39.0
	Total HEP	163	96.9	155	60.6	36.3
	Control	111	97.2	92	71.7	25.5
Instructional Library 4	Field	18	100.0	18	88.8	11.2
	Pilot	42	95.2	39	74.3	20.9
	Inst.	103	97.0	98	70.4	26.6
	Total HEP	163	98.7	155	73.5	25.2
	Control	111	97.2	92	78.2	19.0
Instructional Library 7	Field	18	100.0	18	94.4	5.6
	Pilot	42	97.6	39	87.1	10.5
	Inst.	103	99.0	98	81.6	17.4
	Total HEP	163	98.7	155	84.5	14.2
	Control	111	99.0	92	81.5	17.5

APPENDIX 10 (continued): Achievement Gain of HEP and Non-HEP Pupils on Reading Diagnostic Stack

Subprograms	School Type	Pretest		Posttest		Percentage of Students Not Needing Subprograms at End of Year*
		No. of Students	Percentage of Students Needing	No. of Students	Percentage of Students Needing	
First Grade:						
Instructional	Field	18	100.0	18	94.4	5.6
Library 10	Pilot	42	97 6	39	92.3	5.3
	Inst.	103	100.0	98	90.8	9.2
	Total HEP	163	99.3	155	91.6	7.7
	Control	111	100.0	92	86.9	13.1

* Percentages disregard those students originally diagnosed during the pretest as Not Needing the subprograms.

** The regression figures may be attributed to scoring errors in diagnosis (either in pretesting or posttesting) or in the pre- and post-testing of different sample pupils.

APPENDIX 11

Number of Students Observed by Sex, Grade Level, Type of School, and Classroom Organization

	Field School		Pilot School		Installation School		Totals	
	3/2	SC	3/2	SC	3/2	SC	3/2	SC
BOYS: K	1		1	1	4	14	6	15
1		1	3	2	14	3	17	6
2	3		1	1			4	1
3	1		1				2	
Subtotals	5	1	6	4	18	17	29	22
GIRLS: K			2	2	8	16	10	18
1	1	1	2	2	11	1	14	4
2	3						3	
3	1		2				3	
Subtotals	5	1	6	4	19	17	30	22
Grand Totals	10	2	12	8	37	34	59	44

APPENDIX 12

Self-direction Ratings by Sex, Grade Level, Type of School and Classroom Organization

		Three-on-two												Self-contained											
		Most of the Time			Some of the Time			Seldom			Unable to Judge			Most of the Time			Some of the Time			Seldom			Unable to Judge		
	Gr.	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I
BOYS:																									
a. Selects activity without teacher direction	K					1	3	1		1					1	10			2			1			1
	1		3	8			2			3			1	1	3	2			1						
	2	2			1	1												1							
	3	1	1												1										
b. Gathers materials without teacher direction	K	1		1		1	3								1	12			2						
	1		3	10			2						2	1	3	2									
	2	2			1	1												1							
	3	1	1												1										
c. Begins work without teacher direction	K		1		1		3			1					1	10			4						
	1		2	8*		1	2*			2*			1*	1	2	1		1	2						
	2	2			1	1												1							
	3	1	1												1										
d. Makes program tags without teacher direction	K			1				1		2		1	1		1	7**			2**			**			3**
	1		2	5			1			1		1	7	1	2				1			1		1	1
	2	3				1												1							
	3	1	*			*			*			*			*			*			*			*	
e. Locates tutor when needed without teacher direction	K			1						2	1	1	1			7			4			1		1	2
	1		1	4*			*			3*		2	6*	1	1	1						1		2	1
	2				2	1					1							1							
	3	1	*			*			*			*			*			*			*			*	
f. Attempts to solve problems on his own before going to teacher	K				1		1			2		1	1		1	7			7						
	1		2	6			2			2		1	4	1	2	1			1			1		1	
	2		1		2			1							1										
	3	1	1												1										

APPENDIX 12 (continued): Self-direction Ratings by Sex, Grade Level, Type of School and Classroom Organization

		Three-on-two												Self-contained											
		Most of the Time			Some of the Time			Seldom			Unable to Judge			Most of the Time			Some of the Time			Seldom			Unable to Judge		
	Gr.	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I
g. Uses equipment/ materials without teacher supervision	K	1	1	1			3								1	12			2						
	1		3	10			2			1			1	1	3	2			1						
	2	2			1	1												1							
	3	1	1												1										
h. Puts materials away without teacher supervision	K	1		3		1	1								1	12			1			1			
	1		3	13			1							1	3	1						2			
	2	2			1	1												1							
	3	1	1												1										
i. Changes activity without teacher direction	K			1		1	1	1		2					1	9			3			1			1
	1		3	9			1			3			1	1	3	1			2						
	2	1	1		2										1										
	3	1	1												1										
Subtotals		26	33	81	13	12	26	4		25	2	7	26	9	39	97		8	35			10		5	9
GIRLS:																									
a. Selects activity without teacher direction	K		2	6			1			1					1	13*		1	1*			1*			*
	1	1	2	9			2							1	2	1									
	2	3																							
	3	1	2	1																					
b. Gathers materials without teacher direction	K		2	6			1			1					1	13		1	3						
	1	1	2	11										1	2	1									
	2	3																							
	3	1	2	1																					
c. Begins work without teacher direction	K		2	6			1			1					2	13*			2*			*			*
	1	1	1	7		1	4							1	2	1									
	2	3																							
	3	1	2	1																					
d. Makes program tags without teacher direction	K		1	3			1					1	4			7			2					2	7
	1	1	2	5									6	1	2	*			*			*			*
	2	3																							
	3	1	1								1	1													

APPENDIX 12 (continued): Self-direction Ratings by Sex, Grade Level, Type of School and Classroom Organization

		Three-on-two												Self-contained											
		Most of the Time			Some of the Time			Seldom			Unable to Judge			Most of the Time			Some of the Time			Seldom			Unable to Judge		
	Gr.	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I	F	P	I
e. Locates tutor when needed without teacher direction	K		2	5									3		1	11		1	1			1			3
	1			5		1				2	1	1	4	1	2	*			*			*			*
	2	1			1						1														
	3	1	1			1						1	1												
f. Attempts to solve problems on his own before going to teacher	K		1	5			1					1	2			10		2	4						2
	1		1	3	1	1	3			1			4			1	1	2							
	2	2						1																	
	3	1	1	1		1																			
g. Uses equipment/ materials without teacher supervision	K		2	7						1					1	14		1	2						
	1	1	1	10		1							1	1	2	1									
	2	3																							
	3	1	2	1																					
h. Puts materials away without teacher supervision	K		2	8											2	14*			1*			*			*
	1	1	1	10		1	1							1	2	1									
	2	3																							
	3	1	2	1																					
i. Changes activity without teacher direction	K		2	6			1			1			1		1	12		1	4						
	1	1	2	9			2							1	2	1									
	2	2			1																				
	3	1	1	1		1																			
Subtotals		39	42	128	3	8	18	1		8	2	4	27	8	25	113	1	9	20			2		2	12
Grand Totals		65	75	209	16	20	44	5		33	4	11	53	17	64	210	1	17	55			12		7	21

* Indicates one no response
** Indicates two no responses

APPENDIX 13

Percentages of Ratings on Fourteen Behavioral Characteristics in Self-direction of HEP and Non-HEP Pupils

	Male: Field School						Pilot School						Installation School						Control School					
	3/2			SC			3/2			SC			3/2			SC			3/2			SC		
	N=47			N=49			N=274			N=54			N=67			N=69			N=19			N=26		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Kindergarten:																								
1. Selects an activity from those suggested by the teacher	89	9		94	6		81	17	2	80	15	2	87	12	1	86	9	6	58	42		65	23	12
2. Selects independently an appropriate activity to begin the day	82	13	2	92	8		57	30	13	65	20	11	67	25	7	74	22	4	16	79	5	54	42	4
3. Begins work on an activity after selection	79	17	2	86	12	2	56	39	5	61	30	6	79	15	6	81	17	1	53	47		69	27	4
4. Goes from one activity to a second appropriate one without teacher direction	21	70	6	67	29	4	24	54	21	44	31	20	39	48	13	55	30	14	58	42		54	34	12
5. Locates the materials he needs on his own	60	36	2	78	22		47	47	5	59	28	9	66	30	4	67	32	1	53	47		73	27	
6. Picks up work where he left off	70	26	2	71	27	2	52	37	11	52	30	15	67	30	3	70	26	4	37	53	10	42	50	8
7. Attempts to solve problems before going to the teacher for help	19	47	32	57	29	14	30	54	16	39	31	26	22	60	18	35	45	20	47	47	5	38	54	8
8. Solves problems on his own without going to the teacher	4	60	34	41	24	35	16	58	26	37	31	28	10	60	30	16	54	30	16	79	5	38	50	12
9. Solves problems with the help of others without going to the teacher	6	72	19	61	18	20	19	55	26	39	35	22	15	57	28	25	55	20	16	74	10	58	34	8
10. Asks the teacher for help when he needs it	74	21	2	80	10	10	67	26	7	56	35	7	75	24	1	75	20	4	74	26		96	4	
11. Uses materials and/or equipment properly	49	47	2	71	24	4	55	39	6	54	39	4	63	33	4	67	30	3	58	42		65	35	
12. Puts materials away when he finishes working	57	38	2	78	22		57	34	9	52	39	6	58	40	1	78	19	3	47	42	10	61	35	4
13. Helps other children learn	49	43	6	73	18 18	8	50	38	12	54	20	22	52	36	12	68	23	9	16	63	21	54	27	19
14. Accepts learning from other children	64	30	4	90	10		66	29	4	61	28	7	72	28		77	20	3	42	53		65	35	

	Female: Field School						Pilot School						Installation School						Control School					
	3/2			SC			3/2			SC			3/2			SC			3/2			SC		
	N=49			N=49			N=242			N=49			N=49			N=54			N=32			N=29		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Kindergarten:																								
1. Selects an activity from those suggested by the teacher	92	8		92	8		86	12	1	86	12	2	86	12		85	9	6	59	41		69	3	28
2. Selects independently an appropriate activity to begin the day	92	8		92	8		67	27	6	78	18	4	65	33	2	85	15		22	72	6	83	14	3
3. Begins work on an activity after selection	86	14		78	16	6	77	21	.4	78	16	6	86	14		80	20		53	47		83	17	
4. Goes from one activity to a second appropriate one without teacher direction	39	53	8	65	24	10	38	51	11	47	43	10	41	53	6	70	26	4	53 34	63	3	65	31	3
5. Locates the materials he needs on his own	70	30		69	27	4	65	32	2	61	37	2	73	27		91	9		50	50		76	24	
6. Picks up work where he left off	76	18	6	73	24	2	71	25	3	61	31	8	63	33	4	83	17		38	59	3	59	41	
7. Attempts to solve problems before going to the teacher for help	22	49	29	55	37	8	33	55	12	45	39	16	33	53	14	50	44	6	28	56	16	41	48	10
8. Solves problems on his own without going to the teacher	2	63	35	39	39	22	18	59	23	37	47	16	20	49	31	37	50	13	3	81	16	28	55	17
9. Solves problems with the help of others without going to the teacher	4	76	20	51	37	12	24	54	21	37	49	14	20	61	18	39	48	13		88	9	28	59	3
10. Asks the teacher for help when he needs it	78	20	2	73	20	6	79	19	1	73	24	2	73	27		85	13	2	81	19		90	7	3
11. Uses materials and/or equipment properly	61	39		73	27		77	22	.4	67	29	4	71	29		85	15		66	34		86	14	
12. Puts materials away when he finishes working	63	37		76	24		70	28	2	61	37	2	69	29	2	89	11		63	37		93	7	
13. Helps other children learn	57	35	8	78	14	8	64	31	5	63	27	10	67	24	8	87	7	6	22	62	16	48	34	17
14. Accepts learning from other children	69	31		88	12		81	17	2	67	89	.8	73	24	2	91	7	2	31	63	6	62	34	3

APPENDIX 13 (continued): Percentages of Ratings on Fourteen Behavioral Characteristics in Self-direction of HEP and Non-HEP Pupils

	Male:																								Female:																							
	Field School						Pilot School						Installation School						Control School						Field School						Pilot School						Installation School						Control School					
	3/2			SC			3/2			SC			3/2			SC			3/2			SC			3/2			SC			3/2			SC			3/2			SC			3/2			SC		
	N=77			N=27			N=285			N=36			N=49			N=10			N=28			N=29			N=79			N=32			N=256			N=45			N=41			N=2			N=19			N=29		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
First Grade:																																																
1. Selects an activity from those suggested by the teacher	95	4		85	15		89	9	.3	83	14		98		2	80		20	71	21	7	52	48		91	8		88	13		92	7		91	9		93	7		100			79	16	5	69	31	
2. Selects independently an appropriate activity to begin the day	87	12		85	11	4	74	25	1	72	17	8	94	4	2	90	10		54	39	7	41	48	10	90	8	1	81	19		82	16	.7	80	13	7	85	12	2	100			68	21	11	59	34	7
3. Begins work on an activity after selection	79	19		78	15	7	71	27	1	64	28	6	94	4	2	100			57	32	11	59	41		82	13	4	66	28	6	86	9		62	38		90	10		100			63	32	5	62	31	7
4. Goes from one activity to a second appropriate one without teacher direction	43	53	3	48	44	7	47	44	8	42	39	17	61	35	4	60	40		54	32	14	45	31	24	65	28	6	53	28	19	65	32	2	42	47	11	68	24	7	50		50	42	42	16	48	45	7
5. Locates the materials he needs on his own	71	27		59	41		80	19	1	75	22		90	10		90	10		61	36	3	59	38	3	70	24	4	63	34	3	85	14		62	33	4	88	10	2	100			53	47		62	34	3
6. Picks up work where he left off	70	29		67	33		80	19	.3	61	33	3	78	22		100			46	32	18	55	41	3	78	16	4	66	31	3	82	17		66	24	9	80	15	5	100			47	37	16	69	28	3
7. Attempts to solve problems before going to the teacher for help	29	62	8	26	48	26	44	54	2	33	58	6	45	51	4	60	40		43	46	11	45	38	17	39	52	8	16	69	16	56	41	2	38	47	16	54	39	7	50		50	32	63	5	45	45	10
8. Solves problems on his own without going to the teacher	12	66	21	19	48	33	18	70	12	14	69	14	8	76	16	20	80		25	43	32	31	52	17	20	61	18	13	50	38	27	63	9	16	66	18	10	68	22	50		50	21	63	16	28	52	20
9. Solves problems with the help of others without going to the teacher	17	70	12	22	59	19	28	60	11	8	81	8	10	71	18	20	60		32	50	18	45	45	10	24	62	13	19	56	25	36	54	9	13	78	9	12	71	17	50		50	21	68	11	31	62	3
10. Asks the teacher for help when he needs it	74	25		70	26	4	80	18	1	72	25		92	8		80	10		86	7	7	62	38		76	23		69	25	6	86	12	.3	73	27		80	15	5	50	50		74	26		76	24	
11. Uses materials and/or equipment properly	69	30		44	48	7	79	19	1	61	36		86	14		100			61	39		59	41		75	23	1	53	44	3	85	14		58	40	2	90	10		100			79	21		69	31	
12. Puts materials away when he finishes working	71	28		52	48		74	25	.3	56	42		76	24		80	20		61	32	7	66	34		75	22	3	59	38	3	81	17	.3	60	40		85	12	2	100			59	42		69	31	
13. Helps other children learn	69	30		52	37	11	70	26	3	44	47	6	84	16		100			43	28	28	41	41	17	77	16	5	63	28	9	79	19	1	49	47	4	88	7	5	100			37	42	21	69	14	17
14. Accepts learning from other children	75	23		70	30		78	21		64	31	3	84	16		100			61	25	14	48	48	3	77	20	2	69	31		83	15	.7	58	38	4	85	15		100			58	32	10	76	24	

APPENDIX 13 (continued): Percentages of Ratings on Fourteen Behavioral Characteristics in Self-direction of HEP and Non-HEP Pupils

	Male:																		Female:																	
	Field School						Pilot School						Control School						Field School						Pilot School						Control School					
	3/2			SC			3/2			SC			SC			SC			3/2			SC			3/2			SC			3/2			SC		
	N=85			N=33			N=178			N=31			N=17			N=12			N=83			N=32			N=151			N=20			N=18			N=7		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Second Grade:																																				
1. Selects an activity from those suggested by the teacher	95	5		91	9		87	6	3	84	10		41	59		67	33		93	5		94	6		89	6	1	100			44	50	6	86	14	
2. Selects independently an appropriate activity to begin the day	88	12		88	12		81	14	1	77	10	6	29	59	12	17	33	50	93	5		94	6		86	9	1	95	5		44	33	22	28	14	57
3. Begins work on an activity after selection	78	22		82	18		79	16	1	68	26		35	59	6	58	42		89	8		88	12		85		1	85	15		50	39	11	86	14	
4. Goes from one activity to a second appropriate one without teacher direction	46	48	6	61	39		56	38	2	39	52	3	35	47	18	33	67		70	27	1	84	16		71	24	1	75	20	5	39	39	22	57	43	
5. Locates the materials he needs on his own	69	31		64	36		80	15	1	77	16		29	65	6	58	42		87	11		66	34		83	13		85	15		22	61	17	71	14	
6. Picks up work where he left off	59	40	1	73	27		79	16	1	71	19	3	24	59	17	75	25		83	14		69	31		86	10		95	5		28	50	22	86	14	
7. Attempts to solve problems before going to the teacher for help	33	52	15	39	55	6	60	35	1	39	45	10	12	65	23	75	25		47	45	6	31	69		69	26	1	45	50	5	17	66	17	57	43	
8. Solves problems on his own without going to the teacher	14	62	24	18	73	9	38	57	1	10	65	19	17	65	6	67	33		23	65	10	19	78	3	36	60		15	60	25	11	72	17	57	28	14
9. Solves problems with the help of others without going to the teacher	18	61	20	18	79	2	44	51	1	32	55	6	24	59	17	33	67		24	69	5	16	81	3	46	50		50	50		17	61	22	71	28	
10. Asks the teacher for help when he needs it	52	44	4	82	18		83	12	1	77	16		35	47	18	83	17		75	22	1	78	19	3	85	11		100			50	39	11	100		
11. Uses materials and/or equipment properly	67	32		61	33	6	80	16		61	32		41	33	6	83	17		87	11		69	31		87	8	1	85	15		33	61	6	100		
12. Puts materials away when he finishes working	62	36		76	24		66	29	1	61	32		12	82	6	75	25		81	17		72	28		79	16		75	25		33	56	11	100		
13. Helps other children learn	62	35	26	67	30	3	73	27		52	42		12	47	41	42	58		81	16	1	78	22		84	11	1	85	15		28	50	22	71	28	
14. Accepts learning from other children	67	32		82	18		78	17		65	29		24	76		42	58		87	11		78	22		85	11		80	20		28	66	6	100		

APPENDIX 13 (continued): Percentages of Ratings on Fourteen Behavioral Characteristics in Self-direction of HEP and Non-HEP Pupils

	Male:																		Female:																	
	Field School						Pilot School						Control School						Field School						Pilot School						Control School					
	3/2			SC			3/2			SC			3/2			SC			3/2			SC			3/2			SC			3/2			SC		
	N=102			N=4			N=103			N=16			N=17			N=4			N=124			N=7			N=110			N=6			N=12			N=6		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Third Grade:																																				
1. Selects an activity from those suggested by the teacher	95	5		100			89	8		50	44	6	29	71		75	25		98	2		100			88	5		100			92	8		100	17	
2. Selects independently an appropriate activity to begin the day	90	8	2	100			84	12	1	50	13	37	23	53	23		75	25	95	5		100			86	6		100			92	8		83	17	
3. Begins work on an activity after selection	78	20	2	75	25		84	13		25	56	19	41	53	6	50	50		90	10		100			87	5		100			67	25		100		
4. Goes from one activity to a second appropriate one without teacher direction	40	53	7	75	25		80	17	1	6	50	44	29	47	23	25	75		69	28	7	100			82	10	1	83	17		75	17	8	83	17	
5. Locates the materials he needs on his own	58	41	1	100			85	12		18	69	13	53	35	12	75	25		75	25		100			87	5		100			67	25	8	83	17	
6. Picks up work where he left off	63	36	1	100			75	22		12	69	19	29	59	12	50	50		74	26		100			84	9		83	17		83	8	8	83	17	
7. Attempts to solve problems before going to the teacher for help	22	69	9	100			73	24		6	88	6	23	65	12	75	25		48	48	3	100			76	16		67	33		42	25	33	50	50	
8. Solves problems on his own without going to the teacher	7	73	20	100			52	44	1	6	88	6	18	64	18	25	75		23	67	10	86	14		60	32	1	50	50		16	42	42	33	67	
9. Solves problems with the help of others without going to the teacher	9	72	19	100			60	37		6	88	6	18	76	6	50	50		33	58	9	100			66	26		67	33		33	50	16	67	33	
10. Asks the teacher for help when he needs it	72	26	2	100			83	14		25	75		41	41	18	75	25		88	10	2	86	14		85	7		83	17		42	16		83		
11. Uses materials and/or equipment properly	64	34	2	100			82	12	4	25	62	13	47	53		50	25	25	76	24		100			88	5		100			75	25		100		
12. Puts materials away when he finishes working	51	47	2	100			80	16	2	13	81	6	35	59	6	25	75		73	27		100			77	14	1	100			83	17		83	17	
13. Helps other children learn	53	43	4	75	25		81	15	2	25	69	6	23	64	12	75		25	66	28	6	100			87	5		67	33		42	33	25	100		
14. Accepts learning from other children	56	44		75	25		85	11	1	13	81	6	18	64	18	75	25		79	19	2	100			88	5		83	17		42	33	25	100		

APPENDIX 14

Summary of Comparative Study Between HEP and Non-HEP Pupils*

Measure Used	Type of Sch./ Class. Org./ Ability Sub-grouping	HEP Pupils		Non-HEP Pupils		Output Differences	
		N	Adjusted Mean**	N	Adjusted Mean**	Group Favored***	Degree of Significance
Kindergarten:							
1. Books Read	Field	19	1.4	116	.5	HEP	
	Pilot	36	1.7			HEP	
	Inst.	228	2.7			HEP	
2. Listening Exer.	High Group	71	7.41	20	6.75	HEP	NS
	Medium Group	94	6.44	33	7.74	non-HEP	NS
	Low Group	55	6.56	32	5.63	HEP	.05
	Inst. 3/2	87	6.83	38	6.67	HEP	NS
	Pilot 3/2	14	5.63			non-HEP	NS
	Inst. SC	101	6.79	47	6.92	non-HEP	NS
	Pilot SC	8	5.69			non-HEP	NS
	Field 3/2 & SC	16	6.79			HEP/non-HEP	NS
3. Speaking Test							
Listening Score	High Group	60	10.66	20	6.88	HEP	.05
Talking Score	High Group	56	7.37	22	6.25	HEP	NS
Total Score	High Group	62	16.96	22	12.53	HEP	NS
Listening Score	Medium Group	62	7.23	31	6.10	HEP	NS
Talking Score	Medium Group	65	8.26	29	7.84	HEP	NS
Total Score	Medium Group	72	13.68	32	12.03	HEP	NS
Listening Score	Low Group	36	4.92	26	6.15	non-HEP	NS
Talking Score	Low Group	40	6.73	31	5.99	HEP	NS
Total Score	Low Group	43	10.36	32	10.74	non-HEP	NS
Listening Score	Inst. 3/2	71	7.24	38	6.33	HEP	NS
	Inst. SC	69	8.96	39	6.99	HEP	NS
	Pilot 3/2 & SC	17	6.00			non-HEP/non HEP	NS
	Field 3/2 & SC	6	4.74			non-HEP/non HEP	NS
Talking Score	Inst. 3/2	74	6.92	39	7.55	non-HEP	NS
	Inst. SC	70	8.45	43	6.12	HEP	NS
	Pilot 3/2 & SC	15	6.43			non-HEP/HEP	NS
	Field 3/2 & SC	6	5.99			non-HEP/non-HEP	NS
Total	Inst. 3/2	79	12.99	41	12.28	HEP	NS
	Inst. SC	78	15.55	45	11.93	HEP	NS
	Pilot 3/2 & SC	18	10.61			non-HEP/non-HEP	NS
	Field 3/2 & SC	7	9.42			non-HEP/non-HEP	NS
4. SCAMIN							
Goal & Achievement Needs	High Group	64	26.39	17	25.48	HEP	NS
Failure Avoid	High Group	66	24.43	18	23.24	non-HEP	NS
Role Expectation & Self-Adequacy	High Group	69	45.28	20	44.29	HEP	NS
G & AN	Medium Group	73	25.65	23	25.94	non-HEP	NS
FA	Medium Group	73	22.86	24	25.21	HEP	NS
RE & SA	Medium Group	78	44.26	27	44.62	non-HEP	NS

APPENDIX 14 (continued): Summary of Comparative Study Between HEP and Non-HEP Pupils*

	Type of Sch./ Class. Org./ Ability Sub-grouping	HEP Pupils		Non-HEP Pupils		Output Differences	
Measure Used		N	Adjusted Mean**	N	Adjusted Mean**	Group Favored***	Degree of Significance
G & AN	Low Group	38	22.62	24	24.48	non-HEP	NS
FA	Low Group	39	20.44	25	21.11	HEP	NS
RE & SA	Low Group	38	41.85	22	27.02	non-HEP	NS
G & A N	Inst. 3/2	72	25.02	27	26.86	non-HEP	NS
	Pilot 3/2	10	26.10			non-HEP	NS
	Inst. SC	86	24.78	37	24.95	non-HEP	NS
	Pilot SC	6	25.28			HEP	NS
	Field 3/2 & SC	6	24.50			non-HEP/non-HEP	NS
FA	Inst. 3/2	72	22.30	31	24.95	HEP	NS
	Pilot 3/2	12	25.24			non-HEP	NS
	Inst. SC	85	22.70	36	22.36	non-HEP	NS
	Pilot SC	7	23.02			non-HEP	NS
	Field 3/2 & SC	7	23.66			HEP/non-HEP	NS
RE & SA	Inst. 3/2	78	44.24	33	45.20	non-HEP	NS
	Pilot 3/2	12	41.72			non-HEP	NS
	Inst. SC	88	44.15	36	45.77	non-HEP	NS
	Pilot SC	7	47.04			HEP	NS
	Field 3/2 & SC	5	36.90			non-HEP/non-HEP	NS
5. Attitude Toward School & School Activities	High Group	63	31.31	20	31.21	HEP	NS
	Medium Group	77	32.04	28	31.14	HEP	NS
	Low Group	45	28.49	26	31.12	non-HEP	NS
	Inst. 3/2	70	31.26	35	31.71	non-HEP	NS
	Pilot 3/2	13	31.78			HEP	NS
	Inst. SC	83	30.23	39	30.84	non-HEP	NS
	Pilot SC	8	32.42			HEP	NS
	Field 3/2 & SC	11	31.34			non-HEP/HEP	NS
6. Number of Days Absent	Field	19	23.6	116	8.9	non-HEP	
	Pilot	36	16.1			non-HEP	
	Inst.	228	12.5			non-HEP	
First Grade:							
1. Books Read	Field	19	8.6	114	2.8	HEP	
	Pilot	37	11.3			HEP	
	Inst.	108	8.8			HEP	
2. Handwriting Exercise	High Group	37	19.17	27	18.73	HEP	NS
	Medium Group	52	17.34	24	16.81	HEP	NS
	Low Group	36	15.72	22	12.69	HEP	.05
	Inst. 3/2	71	17.80	29	15.62	HEP	NS
	Pilot 3/2	12	18.15			HEP	NS
	Inst. SC	14	17.44	44	16.60	HEP	NS
	Pilot SC	16	14.70			non-HEP	NS
	Field 3/2 & SC	15	17.83			HEP/HEP	NS

APPENDIX 14 (continued): Summary of Comparative Study Between HEP and Non-HEP Pupils*

Measure Used	Type of Sch./ Class. Org./ Ability Sub-grouping	HEP Pupils N	HEP Pupils Adjusted Mean**	Non-HEP Pupils N	Non-HEP Pupils Adjusted Mean**	Output Differences Group Favored***	Output Differences Degree of Significance
3. Listening Exercise	High Group	39	8.17	28	6.48	HEP	.01
	Medium Group	49	6.90	29	6.38	HEP	NS
	Low Group	41	6.59	22	6.68	non-HEP	NS
	Inst. 3/2	73	7.32	31	5.94	HEP	.05
	Pilot 3/2	17	7.35			HEP	NS
	Inst. SC	13	6.76	48	6.85	non-HEP	NS
	Pilot SC	16	6.65			non-HEP	NS
	Field 3/2 & SC	12	7.36			HEP/HEP	NS
4. Speaking Test							
Listening Score	High Group	35	12.63	25	10.75	HEP	NS
Talking Score	High Group	37	11.72	24	8.31	HEP	.05
Total Score	High Group	38	22.82	26	17.95	HEP	.05
Listening Score	Medium Group	42	11.38	28	9.17	HEP	NS
Talking Score	Medium Group	41	9.99	30	8.54	HEP	NS
Total Score	Medium Group	43	20.61	30	17.16	HEP	NS
Listening Score	Low Group	33	7.15	20	8.65	non-HEP	NS
Talking Score	Low Group	33	8.15	21	11.34	non-HEP	.05
Total Score	Low Group	37	13.65	21	19.57	non-HEP	.05
Listening Score	Inst. 3/2	67	10.78	25	9.24	HEP	NS
	Pilot 3/2	17	10.55			HEP	NS
	Inst. SC	9	9.13	48	9.69	non-HEP	NS
	Pilot SC	15	10.16			HEP	NS
	Field 3/2 & SC	5	8.95			non-HEP/non-HEP	NS
Talking Score	Inst. 3/2	68	10.49	28	8.36	HEP	NS
	Pilot 3/2	17	10.25			HEP	NS
	Inst. SC	9	7.07	47	9.77	non-HEP	NS
	Pilot SC	14	11.00			HEP	NS
	Field 3/2 & SC	6	6.72			non-HEP/non-HEP	NS
Total Score	Inst. 3/2	71	20.24	29	16.01	HEP	NS
	Pilot 3/2	18	19.24			HEP	NS
	Inst. SC	10	14.41	48	19.25	non-HEP	NS
	Pilot SC	15	20.52			HEP	NS
	Field 3/2 & SC	7	11.74			non-HEP/non-HEP	NS
5. SCAMIN							
G & AN	High Group	36	26.26	27	26.43	non-HEP	NS
FA	High Group	36	25.31	27	24.85	non-HEP	NS
RE & SA	High Group	34	45.52	28	45.58	non-HEP	NS
G & AN	Medium Group	50	25.59	25	26.38	non-HEP	NS
FA	Medium Group	51	24.42	26	23.80	non-HEP	NS
RE & SA	Medium Group	50	46.22	26	45.89	HEP	NS
G & AN	Low Group	36	26.16	25	24.05	HEP	NS
FA	Low Group	38	24.25	26	23.10	non-HEP	NS
RE & SA	Low Group	37	46.42	25	45.33	HEP	NS
G & AN	Inst. 3/2	70	25.43	29	26.11	non-HEP	NS
	Pilot 3/2	13	26.99			HEP	NS
	Inst. SC	15	27.21	48	25.25	HEP	NS
	Pilot SC	14	25.66			HEP	NS
	Field 3/2 & SC	14	25.47			non-HEP/HEP	NS

APPENDIX 14 (continued): Summary of Comparative Study Between HEP and Non-HEP Pupils*

Measure Used	Type of Sch./ Class. Org./ Ability Sub-grouping	HEP Pupils		Non-HEP Pupils		Output Differences	
		N	Adjusted Mean**	N	Adjusted Mean**	Group Favored***	Degree of Significance
FA	Inst. 3/2	70	24.69	28	24.93	HEP	NS
	Pilot 3/2	13	24.33			HEP	NS
	Inst. SC	16	23.98	51	23.37	non-HEP	NS
	Pilot SC	16	24.07			non-HEP	NS
	Field 3/2 & SC	14	24.79			HEP/non-HEP	NS
RE & SA	Inst. 3/2	70	45.21	29	45.07	HEP	NS
	Pilot 3/2	12	47.57			HEP	NS
	Inst. SC	15	46.05	50	46.10	non-HEP	NS
	Pilot SC	15	46.24			HEP	NS
	Field 3/2 & SC	13	47.16			HEP/HEP	NS
6. Attitude Toward School & School Activities	High Group	36	33.19	25	31.17	HEP	NS
	Medium Group	46	32.69	27	32.31	HEP	NS
	Low Group	39	32.16	28	30.74	HEP	NS
	Inst. 3/2	64	31.91	35	30.82	HEP	NS
	Pilot 3/2	17	35.42			HEP	NS
	Inst. SC	13	33.34	45	32.02	HEP	NS
	Pilot SC	15	30.90			non-HEP	NS
	Field 3/2 & SC	12	33.68			HEP/HEP	
7. Number of Days Absent	Field	19	13.2	114	9.1	non-HEP	
	Pilot	37	12.8			non-HEP	
	Inst.	108	10.1			non-HEP	
Second Grade:							
1. Gates-MacGinitie Reading Test							
Vocabulary	Pilot	12	26.01	44	29.12	non-HEP	NS
	Field	19	25.74			non-HEP	NS
	High Group	4	32.51	20	36.45	non-HEP	NS
	Medium Group	15	22.84	16	26.90	non-HEP	NS
	Low Group	10	20.11	8	22.49	non-HEP	NS
Comprehension	Pilot	12	18.61	49	17.26	HEP	NS
	Field School	19	15.58			non-HEP	NS
	High Group	4	21.06	19	22.25	non-HEP	NS
	Medium Group	15	14.73	14	16.08	non-HEP	NS
	Low Group	10	13.06	7	12.35	HEP	NS
2. Books Read	Field	21	31.7	53	2.3	HEP	
	Pilot	18	51.2			HEP	
3. Handwriting	Field	18	26.54	41	24.03	HEP	NS
	Pilot	11	22.65			non-HEP	NS
	High Group	3	28.19	20	27.62	HEP	NS
	Medium Group	14	23.98	13	23.56	HEP	NS
	Low Group	10	22.09	8	19.39	HEP	NS

APPENDIX 14 (continued): Summary of Comparative Study Between HEP and Non-HEP Pupils*

Measure Used	Type of Sch./ Class. Org./ Ability Sub-grouping	HEP Pupils		Non-HEP Pupils		Output Differences	
		N	Adjusted Mean**	N	Adjusted Mean**	Group Favored***	Degree of Significance
4. Cooperative Primary Listening Test	Field	18	30.04	41	30.18	non-HEP	NS
	Pilot	12	31.30			HEP	NS
	High Group	4	36.09	19	37.19	non-HEP	NS
	Medium Group	13	30.31	14	29.21	HEP	NS
	Low Group	11	24.23	8	23.68	HEP	NS
5. Speaking Test							
Listening Score	Field	18	11.07	33	14.37	non-HEP	NS
	Pilot	13	9.36			non-HEP	NS
Talking Score	Field	19	10.72	33	13.12	non-HEP	NS
	Pilot	14	8.81			non-HEP	NS
Total Score	Field	19	21.44	33	27.31	non-HEP	NS
	Pilot	14	17.61			non-HEP	.01
Listening Score	High Group	4	8.26	17	15.94	non-HEP	.05
Talking Score	High Group	4	11.92	17	14.19	non-HEP	NS
Total Score	High Group	4	20.19	17	30.13	non-HEP	NS
Listening Score	Medium Group	15	11.94	11	12.08	non-HEP	NS
Talking Score	Medium Group	16	8.72	11	12.76	non-HEP	.05
Total Score	Medium Group	16	20.15	11	25.24	non-HEP	NS
Listening Score	Low Group	10	8.10	5	15.20	non-HEP	NS
Talking Score	Low Group	11	9.75	5	12.35	non-HEP	NS
Total Score	Low Group	11	17.10	5	27.59	non-HEP	NS
6. SCAMIN							
G & AN	Field	20	25.01	39	24.64	HEP	NS
	Pilot	12	23.81			non-HEP	NS
FA	Field	20	24.74	39	24.75	HEP	NS
	Pilot	12	26.34			non-HEP	NS
RE & SA	Field	19	44.86	37	44.06	HEP	NS
	Pilot	13	42.11			non-HEP	NS
G & AN	High Group	5	25.57	21	24.48	HEP	NS
FA	High Group	5	25.99	19	25.37	non-HEP	NS
RE & SA	High Group	5	42.55	19	44.28	non-HEP	NS
G & AN	Medium Group	13	24.38	11	25.27	non-HEP	NS
FA	Medium Group	13	26.03	12	25.05	non-HEP	NS
RE & SA	Medium Group	12	43.26	11	45.26	non-HEP	NS
G & AN	Low Group	12	23.91	7	24.72	non-HEP	NS
FA	Low Group	12	23.83	8	23.63	non-HEP	NS
RE & SA	Low Group	13	44.81	7	41.92	HEP	NS
7. Attitude Toward School & School Activities	Field	17	32.04	36	31.95	HEP	NS
	Pilot	14	32.59			HEP	NS
	High Group	5	35.13	18	31.91	HEP	NS
	Medium Group	14	33.60	13	32.66	HEP	NS
	Low Group	12	29.90	5	29.44	HEP	NS

APPENDIX 14 (continued): Summary of Comparative Study Between HEP and Non-HEP Pupils*

Measure Used	Type of Sch./ Class. Org./ Ability Sub-grouping	HEP Pupils		Non-HEP Pupils		Output Differences	
		N	Adjusted Mean**	N	Adjusted Mean**	Group Favored***	Degree of Significance
8. Number of Days Absent	Field	21	8.9	53	7.1	non-HEP	
	Pilot	18	7.6			non-HEP	
Third Grade							
1. Gates MacGinitie Reading Tests	Vocabulary	25	28.45	32	28.40	HEP	NS
	High Group	5	27.77	20	35.61	non-HEP	.05
	Low Group	20	25.22	12	22.05	HEP	NS
	Comprehension	23	25.86	32	21.45	HEP	NS
	High Group	4	29.62	20	28.03	HEP	NS
	Low Group	19	21.49	12	16.14	HEP	NS
2. Books Read	Field	26	57.8	38	2.7	HEP	
	Pilot	6	40.3			HEP	
3. Handwriting		27	26.87	30	28.48	non-HEP	NS
	High Group	7	26.63	19	28.77	non-HEP	NS
	Low Group	20	26.87	11	28.15	non-HEP	NS
4. Cooperative Primary Listening Test		27	32.25	32	33.69	non-HEP	NS
	High Group	7	35.48	20	38.33	non-HEP	NS
	Low Group	20	29.06	12	29.40	non-HEP	NS
5. Speaking Test							
Listening Score		24	17.27	23	16.72	HEP	NS
Talking Score		24	16.56	23	18.20	non-HEP	NS
Total Score		24	33.87	23	34.97	non-HEP	NS
Listening Score	High Group	7	13.42	16	18.88	non-HEP	NS
Talking Score	High Group	7	12.50	16	20.16	non-HEP	.05
Total Score	High Group	7	25.92	16	39.03	non-HEP	.05
Listening Score	Low Group	17	18.20	7	13.37	HEP	NS
Talking Score	Low Group	17	17.93	7	14.45	HEP	NS
Total Score	Low Group	17	36.22	7	27.90	HEP	NS
6. SCAMIN	G & AN	23	24.41	30	24.68	non-HEP	NS
	FA	23	24.97	31	25.54	HEP	NS
	RE & SA	23	42.34	30	41.71	HEP	NS
	G & AN, Hi.Gp.	7	24.98	19	23.53	HEP	NS
	FA, Hi. Gp.	7	26.14	19	25.74	non-HEP	NS
	RE & SA, Hi.Gp.	7	43.42	19	38.53	HEP	NS
	G & AN, Low Gp.	16	24.66	11	25.95	non-HEP	NS
	FA, Low Gp.	16	24.47	12	25.21	HEP	NS
	RE & SA, Low Gp.	16	43.51	11	44.80	non-HEP	NS

APPENDIX 14 (continued): Summary of Comparative Study Between HEP and Non-HEP Pupils*

Measure Used	Type of Sch./ Class. Org./ Ability Subgrouping	HEP Pupils N	HEP Pupils Adjusted Mean**	Non-HEP Pupils N	Non-HEP Pupils Adjusted Mean**	Output Differences Group Favored***	Output Differences Degree of Significance
7. Attitude Toward School and School Activities		26	29.82	28	25.03	HEP	.01
	High Group	7	29.72	17	24.35	HEP	NS
	Low Group	19	30.13	11	25.59	HEP	NS
8. Number of Days Absent	Field	26	9.3	38	7.9	non-HEP	
	Pilot	6	9.8			non-HEP	

* Comparisons were only made for data where mean scores were available. In addition, comparisons were not made between the four types of school by classroom organization.

** Means were not adjusted for the Books Read and Number of Days Absent comparisons. All other means were adjusted by using IQ, SES, and pretest scores as covariates when available and appropriate.

*** In instances where comparisons were made between the four types of schools and/or classroom organization, each type of HEP school and/or class was compared with the control school separately. The only exceptions were between HEP Field and Pilot 3/2 and SC combined scores and control 3/2 and SC scores, where the Field and Pilot scores were compared separately with the control 3/2 and SC scores.

APPENDIX 15

Comparisons Between HEP and Non-HEP Pupils on Various Learning Behaviors

	Strongly Agree			Agree			Disagree			Strongly Disagree			Uncertain			No Response		
HEP Pupils are more competent in:	Tchrs	Adm	ITs	Tchrs	Adm	ITs	Tchrs	Adm	ITs	Tchrs	Adm	ITs	Tchrs	Adm	ITs	Tchrs	Adm	ITs
Operating equipment	40	13	19	51	19	23	8		1				8	4	4	2		
Selecting own activities	31	11	30	59	21	16	11			1			5	4		2		1
Following through on self-selected activities	16	7	16	65	17	28	19		2				7	12		2		1
Seeking help from others when needed	16	7	19	74	20	26	10	4	1				7	5		2		1
Working without disturbing others	15	4	10	32	18	26	36	6	2	10			14	7	7	2	1	2
Helping other children learn	17	8	22	58	26	25	18*			5			9*	2		3		
Recording their own progress	28	8	29	71	19	18	4	2					3	7		3		
Evaluating their own work	16	5	16	71	19	28	11	3	1				9	9	1	2		1
Communicating orally with peers	13	3	19	66	16	24	21	5	1				7	11	2	2	1	1
Writing cursively	26	7	27	55	20	15	10	2	1	3			10	7	4	5		
Undertaking new tasks	15	7	20	66	14	23	15	4					7	11	3	6		1
Reading more	23	7	21	50	12	24	16	4		2			13	12	2	5	1	
Reading a wider variety of books	31	6	30	57	14	16	7	2					11	13	1	3	1	

*One teacher responded to two items

APPENDIX 16

Rate of Response for Student Interviews

	Installation		Pilot				Field				Total			
Grade	K	1	K	1	2	3	K	1	2	3	K	1	2	3
Number Selected	100	44	14	15	8	3	6	6	5	7	120	65	13	10
Number Responding	87	39	9	15	5	2	6	6	5	4	102	60	10	6
Percent of Response	87	88.6	64.2	100	62.5	66.6	100	100	100	57.1	85.0	92.3	76.9	60.0

Rate of Response by Grade, Sex and Type of School for Student Interviews

			Boys	Girls
Grade K		Installation	49	38
		Pilot	5	4
		Field	2	4
	Subtotal		56	46
Grade 1		Installation	23	16
		Pilot	6	9
		Field	4	2
	Subtotal		33	27
Grade 2		Pilot	4	1
		Field	2	3
	Subtotal		6	4
Grade 3		Pilot	1	1
		Field	0	4
	Subtotal		1	5
	Grand Total		96	82

APPENDIX 17

Attitudes About the Hawaii English Program By Grade Level, Sex, and Types of School

	Likes HEP			Tutored A Friend			Likes To Tutor			Was Tutored			Likes To Be Tutored			Tells Parents About HEP			It is Fun In HEP			Learned A Lot			Learned More Than Friends		
	Yes	No	NR	Yes	No	NR	Yes	No	NR	Yes	No	NR	Yes	No	NR	Yes	No	NR	Yes	No	NR	Yes	No	NR	Yes	No	NR
Boys:																											
Grade K Inst.	46	3		38	11		36	2	11	41	8		38	3	8	41	8		45	4		44	5		37	10	2
Pilot	5			5			5			4	1		4		1	4	1		3	2		5			5		
Field	2			2			2			2			2			1	1		2			2			2		
Grade 1 Inst.	21		2	20	2	1	19		4	19	2	2	18	1	4	17	3	3	22		1	18	2	3*	12	8	3*
Pilot	6			6			5	1		6			6			4	2		6			6			3	3	
Field	3	1		4			3	1		3	1		2	1	1	2	2		3	1		4			3	1	
Grade 2 Pilot	4			4			4			3	1		3		1	3	1		4			4			3		1
Field	2			1	1		1		1	2			2				2		2			2				2	
Grade 3 Pilot	1			1			1			1			1			1			1			1				1	
Field																											
Subtotals:	90	4	2	81	14	1	76	4	16	81	13	2	76	5	15	73	20	3	88	7	1	86	7	3*	65	25	6*
Girls:																											
Grade K Inst.	36	2		27	11		.24		14	29	8	1	28	1	9	31	7		36	2		38			30	7	1
Pilot	4			3	1		3		1	4			4			4			4			4			4		
Field	3	1		4			4			4			4			4			4			4			4		
Grade 1 Inst.	15	1		16			15	1		14	2		13	1	2	12	4		15	1		16			12	4	
Pilot	9			8	1		7		2	8	1		7		2	7	1	1	9			9			7	1	1
Field	2			2			2			2			2			2			2			2			1	1	
Grade 2 Pilot	1			1			1			1			1			1			1			1				1	
Field	3			3			2	1		3			3			2	1		3			2	1		2	1	
Grade 3 Pilot	1				1				1	1			1			1			1			1			1		
Field	4			4			4			4			4				4		4			4			1	3	
Subtotals:	78	4		68	14		62	2	18	70	11	1	67	2	13	64	17	1	79	3		81	1		62	18	2
Grand Totals:	168	8	2	149	28	1	138	6	34	151	24	3	143	7	28	137	37	4	167	10	1	167	8	3*	127	43	8*

* One student responded that he didn't know.

APPENDIX 18

Aspects of the Hawaii English Program Children Like Best

	Boys											Girls											Grand Total
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Typing	14			7	2	1		1			25	10	1	2	5					1		19	44
Stacks	13	1		3	3						20	9			1	3			1			14	34
Reading	3	1		1	1						6	4	1		1	4	1		1		3	15	21
Writing	7	1		1			1				10	2	1	1	1	1						6	16
Film Loops		1		1			1				3	3	1		1							5	8
Books	1						1		1		3	2						1				3	6
Tapes	4										4	1										1	5
Instructional Library				3							3				2							2	5
Story Tapes			1	2							3	1			1							2	5
Tutoring				1							1	1		1	2							4	5
All			1			1					2						1					1	3
LM Books												2							1			3	3
TOGD						1		1			2												2
Records															1							1	1
"The Machines"	1										1												1
TOC						1					1												1

APPENDIX 18 (continued): Aspects of the Hawaii English Program Children Like Best

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Listening		1									1												1
Spelling																1						1	1
TOGD Reading																					1	1	1
Typing/Writing												1										1	1
Stacks/Writing	1										1												1
Writing/Film Loops	1										1												1
Reading/ Literature												1										1	1
Records/Tapes				1							1												1
Reading/Writing															1							1	1
Writing/Tapes				1							1												1
Stacks/Books							1				1												1
Instructional Library Writing/ Typing				1							1												1
No Response	1			1							2												2
Non-HEP	3										3	1										1	4

APPENDIX 19

Aspects of the Hawaii English Program Children Like Least

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
None	8			3	1		1				13	10			5	3					2	20	33
Writing	9	2	1	4	2						18	6	3	2	1	2						14	32
Stacks	10	2	1	3	1	1					18	4		2	5		1			1		13	31
Typing	6			1			1		1		9	1			1	1			2			5	14
Tapes	3			4							7	2				2						4	11
Reading	1			1		1		1			4	4	1									5	9
LM/Books	2					1					3	2			1		1		1			5	8
Film Loops	1										1	4			1							5	6
Listening	1					1					2	2				1						3	5
Tutoring/ Being Tutored	2			1							3	1										1	4
Spelling				1							1							1			1	2	3
Stories	1										1												1
Prepositions												1										1	1
All Except Songs	1										1												1
Punctuation			1								1												1

APPENDIX 19 (continued): Aspects of the Hawaii English Program Children Like Least

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Books				1							1												1
Instructional Library															1							1	1
RWC-15															1							1	1
RW																					1	1	1
RABC		1									1												1
Records					1						1												1
Songs							1				1												1
TOC							1				1												1
LM/RABC								1			1												1
Listening/ Speaking					1						1												1
Stacks/Listening/Reading				1							1												1
Don't Know				1							1												1
NR	4			1							5	1										1	6

APPENDIX 20

Aspects of the Hawaii English Program Children Find Easiest To Do

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Typing	12	1		5	1						19	9		2	4	2				1	2	20	39
Stacks	6	1	1	5							13	8	2	2	1	4	1		1			19	32
Writing	6	2		2	1	2	2	1			16	4			3	1						8	24
Reading	4			1	1	2					8	7	2		1	1						11	19
Tapes	3			2							5	3			1							4	9
LM Books/Cards	1				1						2	2			1							3	5
Songs				2							2	1			2							3	5
Listening	2										2	2										2	4
Taped Books	3				1						4												4
Film Loops	2										2				1							1	3
Tutoring								1			1	1				1						2	3
Instructional Library				2							2				1							1	3
Listening to Records	2										2												2
DMs	1	1									2												2
Records					1		1				2												2

APPENDIX 20 (continued): Aspects of the Hawaii English Program Children Find Easiest To Do

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Colors	1										1												1
Charts	1										1												1
All												1										1	1
Spelling															1							1	1
TOC									1		1												1
Verbs 3																		1				1	1
Listening/ Speaking				1							1										1	1	2
Reading/Stacks																					1	1	1
Stacks/RABC																			1			1	1
Phrases/ Sentences				1							1												1
Stacks/Writing																	1					1	1
Songs/ Type/Stacks	1										1												1
Flock Cards/ Stacks	1										1												1
Stacks/Typing			1								1												1
WDs/Language																			1			1	1
Non-HEP	2			1							3												3
NR	1			1			1				3												3

APPENDIX 21

Aspects of the Hawaii English Program Children Find Hardest To Do

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
Stacks	15	3		7	1	4	1		1		32	14			3					1		18	50
Writing	13		1	4			1				19	10	2	3	1	2						18	37
Reading	5			5	2		1				13	1	1	1	2	2			1			8	21
Typing	7	1		3							11	4			4		1					9	20
Instructional Library	1	1			2						4	2			3	4						9	13
LM Books	2			1				1			4		1									1	5
Film Loops	1		1								2	1										1	3
Punctuation								1			1										2	2	3
None												1			2							3	3
Tapes												1										1	1
Prepositions												1										1	1
Being Tutored												1										1	1
Songs	1										1												1
SRA Booklets																		1				1	1
Pronoun																			1			1	1

APPENDIX 21 (continued): Aspects of the Hawaii English Program Children Find Hardest to Do

	Boys											Girls											
	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grade K			Grade 1			Grade 2		Grade 3		Sub-Total	Grand Total
	I	P	F	I	P	F	P	F	P	F		I	P	F	I	P	F	P	F	P	F		
CLS																					1	1	1
Speaking/ Listening					1						1					1						1	2
SRA/Affixes																					1	1	1
Reading/TOGD																			1			1	1
Colors and Shapes															1							1	1
Non-HEP	1										1	1										1	2
No Response	3			3			1				7	1			1							2	9

APPENDIX 22

Rate of Return of Installation Teacher Log Sheet

District	Total # of ITs in Remote Areas	Oct	%	Nov	%	Feb	%	Apr	%	Total	%
Hawaii	6	0	0%	0	0%	2	33%	3	50%	5	20.8%
Maui	2	0	0%	1	50%	0	0%	1	50%	2	25%
Kauai	2	2	100%	1	50%	2	100%	1	50%	6	75%
Subtotal	10	2	20%	2	20%	4	40%	5	50%	13	32.5%
	Total # of Regular ITs										
Honolulu	11	11	100%	11	100%	10	90.9%	10	90.9%	42	95.4%
Windward	6	6	100%	6	100%	6	100%	5	83.3%	23	95.8%
Leeward	6	6	100%	5	83.3%	5	83.3%	6	100%	22	91.6%
Central	7	5	71.4%	4	57.1%	3	42.8%	4	57.1%	16	57.1%
Maui	5	5	100%	5	100%	3	60%	4	80%	17	85%
Kauai	3	2	66.6%	2	66.6%	2	66.6%	2	66.6%	8	66.6%
Hawaii	5	5	100%	5	100%	5	100%	4	80%	19	95%
Subtotal	43	40	93%	38	88.3%	34	79%	35	81.3%	147	85.4%
Grand Total	53	42	79.2%	40	75.4%	38	71.6%	39	73.5%	180	84.9%

APPENDIX 23

Average Percentage* of Time Spent on Various Activities by Installation Teacher

District	Administration and Paperwork					Assisting with Evaluation					Assisting Teacher with New Materials					Assisting Teacher with Planning				
	Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist
Honolulu	15	21	18	11	16	2	6	3	6	4	16	17	12	4	12	9	13	6	6	9
Central	17	35	17	21	23	1	5	0	3	2	13	10	8	3	9	10	8	10	4	8
Leeward	40	48	32	23	36	6	5	4	7	6	9	12	7	2	8	3	5	5	8	5
Windward	23	29	31	27	28	0	0	7	9	4	14	11	7	7	10	8	6	9	4	7
Hawaii	17	15	41	30	26	6	5	3	3	4	12	12	4	1	7	9	8	5	8	8
Maui	17	31	43	14	26	5	11	15	5	9	10	9	8	6	8	15	5	5	5	8
Kauai	20	28	25	25	25	3	3	5	10	5	8	18	3	3	8	15	5	10	10	10
Remote Areas	3	3	20	7	4	5	5	3	2	4	3	3	4	1	3	10	8	3	4	6
Average By Reporting Periods	19	26	28	20		4	5	5	6		11	12	7	3		10	7	7	6	
Statewide Average Per Category	23					5					8					8				

* Rounded off to nearest whole number

APPENDIX 23 (continued): Average Percentage* of Time Spent on Various Activities by Installation Teacher

Classroom Observation					Conferences & Mtgs. with Administrators					Explaining HEP to Others					Working with Children					Others				
Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist	Oct	Nov	Feb	Apr	Dist
7	6	8	10	8	6	11	12	24	13	5	4	4	7	5	20	18	36	29	26	19	18	1	4	11
15	12	22	21	18	7	8	8	15	9	8	4	3	19	9	8	12	30	11	15	19	8	2	4	8
11	11	17	23	16	8	5	5	6	6	7	2	2	4	4	6	7	28	19	15	10	47	0	8	16
5	6	6	8	6	4	8	7	17	9	7	3	3	5	5	7	10	23	23	16	33	26	8	0	17
11	22	11	16	15	8	7	9	8	8	3	5	3	6	4	14	18	25	23	20	20	7	0	6	8
18	13	7	23	15	6	7	5	11	7	4	7	5	1	4	16	16	12	30	19	12	21	0	0	8
10	7	10	25	13	8	7	18	5	10	3	3	3	8	4	25	33	33	17	27	15	7	0	8	8
5	13	16	6	10	0	3	0	2	1	3	10	1	1	4	73	10	54	61	50	0	58	0	16	19
10	11	12	17		6	7	8	11		5	5	3	6		21	16	30	27		16	24	1	6	
13					8					5					24					12				

APPENDIX 24

Listing of Contexts/Levels That Need Additional Selections/Activities

Contexts/Levels	Selections	Activities	Both
K and 1 levels, or lower	4	6	3
"Animal People"	2	2	2
"Magic and Wonder"	2	2	1
"Narrow Escapes"	3	1	
"Fabulous Creatures," K level	3		
"Heroes and Leaders"	1	2	
Rhythms of Man component	1		
Rhythms of Art component	1		
"World Around Us"	1		
Easier and More Colorful Selections	1		
"Self and Family," Context K and 1		1	
"Self and Family," Context 1		1	
"Self and Family," Context 2		1	
Rhythms of Nature component (books)			1

APPENDIX 25

Selections/Activities That Should be Deleted From the Program

Component/Title/Subject	Selections			Activities		
	F	P	I	F	P	I
Poems (too difficult)			2			
Poems from other countries (too difficult)			1			
Rhythms of Art (All poems):						
"The Rain"		1				
"A Scurry"		1				
"Rain, Rain"		1				
"Sudden Storm"		1				
"Rain, Rain, Go Away"		1				
Rhythms of Nature poems	3					
"A Cow at Sullington" (poem)		1				
"An Epicure" (poem)		1				
The Fooling of King Alexander		1				
Mr. Miacca			1			
Kathie's Chickens			1			
"Jack and the Beanstalk"			1			
Pilgrim's Party		1				
Design is a Dandelion		1				
Rhythms of Art						
"The Optimist"		1				
"Point of View"		1				
Self and Family component		1				
The Arbuthnot Anthology		1				
Russian Anthology		1				
Less emphases on character portrayals in creative drama				2		
Games						3
Games with spinners						2
"Horse Who Lived Upstairs" (game)					1	
"Baba Yaga" (game)						1
Adapt activity in "The Mitten" for 3-on-2		1				
More selective in activities					1	
More variety of activities					1	
Activities requiring screws and metal objects						1

APPENDIX 26

Components Inadvertently Taught in Their Entirety

Components	Field Schools	Pilot Schools	Inst. Schools
Self and Family		1	3
Animal People		3	
Fabulous Creatures	1	1	
Magic and Wonder			2
Heroes and Leaders		1	
Rhythms of Man	1		
Most of K and 1 Levels			1
Components 1, 2, 3, 4, 8			1

APPENDIX 27

Tabulation of Components Used During Observations

Component	3-on-2	S.C.	Total
1: Magic and Wonder	2	1	3
2: Fabulous Creatures	1	2	3
3: Rhythms of Man	3	1	4
4: Rhythms of Nature	3	2	5
5: Rhythms of Art	3	2	5
6: Imagining Things	4	1	5
7: Self and Family	2	2	4
8: Animal People	5	2	7
9: Heroes and Leaders	1	4	5
10: Narrow Escapes	4	1	5
No Indication			1

APPENDIX 28

Classroom Teacher Opinions of Activities in the Advertising Unit

Activity	Frequencies	
	Most Successful	Least Successful
Worksheet # 1 : Lion is Busy	3	1
Worksheet # 3 : Switcheroos		1
Worksheet # 4 : Guessing games	5	
Worksheet # 5 : Scrambled Puns	2	2
Worksheet #12 : Rhyming	3	
Worksheet #13 : Fish game	1	
Worksheet #13a: Matching sentences	3	2
Worksheet #13b: Sentence-combining	3	
Worksheet #14 : Nonsense words	1	
Worksheet #15 : Time for Yourself	1	
Worksheet #16 : Alliteration	7	1
Worksheet #17 : Song-a-lells	1	
Worksheet #18 : Find-a-phrase		4
Worksheet #20 : Parallelism		1
Worksheet #23 : Slogans		1
Worksheet #24 : Shaping words		1
Worksheet #25 : Classifying ads	2	5
Worksheet #28 : Identifying allusions		2
Worksheet #29 : Bartletts		4
Worksheet #30 : Making names for products	1	5
Worksheet #31 : Making ads	2	1
Worksheet #32 : Cross-sensory switches		2

APPENDIX 28 (continued): Classroom Teacher Opinions of Activities in the Advertising Unit

Activity	Frequencies	
	Most Successful	Least Successful
Worksheet #33 : Writing commercials	8	
Worksheet #34 : Marketing research	4	1
Worksheet #35 : Writing & presenting TV ads		1
Card games	3	
Films	2	
Dialogue	1	1
Fold-a-rama	1	6
Bulletin Boards		1

APPENDIX 29

Classroom Teacher Opinions on Contents of the Teachers Manual for the Advertising Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Description of activities	6	
Daily plans	3	
Organization/suggested sequence and procedure/flowchart	3	1
Reference list	2	1
Suggestions for discussion	1	2
Answer key	1	
Illustration for bulletin board	1	
Index table		2
Suggestions for correcting worksheets		1
Labeling tabs		1
Tapes and slides		1
Rules for games		1

APPENDIX 30

Classroom Teacher Opinions of Activities in the Animal Communications Unit

Activity	Frequencies	
	Most Successful	Least Successful
Worksheet # 1: Identifying non-language visual signs	1	
Worksheet # 4: Odors Galore	1	
Worksheet # 5: Lets Shake on It	1	
Worksheet # 6: Sink Your Teeth into This	1	
Worksheet # 9: Creepy Creatures	1	
Worksheet #10: Signal bingo	1	
Worksheet #16: Message features	1	
Worksheet #17: Nuvo		1
Worksheet #18: Brand Nuvo		1
Worksheet #23: Expanding, Expanded, Expando		1
Worksheet #25: Confusall	1	
Worksheet #26: Nonsense Syllables	1	
Worksheet #29: Language features		3
Worksheet #34: Design features		1
Worksheet #41: Man-Dolphin Communications; slides on dolphin	2	4
Worksheet #42: Making card games		1
Charades	2	
Mind reading tricks	4	
Research file cards	1	2

APPENDIX 30 (continued): Classroom Teacher Opinions of Activities in the Animal Communications Unit

Activity	Frequencies	
	Most Successful	Least Successful
Game cards	1	
Games	6	1
Visiting Activity	1	
Cue cards for human visual signal	1	
Research activity	1	1
Dialogue	1	
Filmstrip and tape	1	5
Guesses and findings for man	1	
Demonstration of game	1	
Clever Hans	1	1
Film loop and activity books	1	2
Film	1	
Preview-Review test	1	
Species and mode chart		3
Chart and research cards		2
Discussion activities		1

APPENDIX 31

Classroom Teacher Opinions on Contents of the Teachers Manual for the Animal Communications Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Daily lesson plans	4	
List of materials	2	
Explanation of activities	1	
Suggested activities	1	
Cues for conducting activities	1	1
Answer keys	1	2
Preview-Review test	1	
Organization of the manual	1	
Page labels		3
Construction of games suggestions		1
Teachers' features		1
Information on how to arrange species, mode, cards, & large charts		1

APPENDIX 32

Classroom Teacher Opinions of Activities in the Sign Languages Unit

Activity	Frequencies	
	Most Successful	Least Successful
Making gesture messages	5	
The interview (although ten are too many)	4	
Research projects	3	2
Pantomime skits	3	
Animal and human signals	2	
Signo card game	2	
Filmloop on sign language	2	
Gestures I: Phonomimics	2	
Story of Ilio	1	
Signs for the deaf	1	1
Learning difficult sign language	1	
Making tests for research	1	
Activity sheet: Communication or Language I	1	
Demonstrating phrases	1	
Missing picture puzzles	1	
Cartoons	1	
Discussing dialogue		1
Cued speech		1
Chimpanzee learning		1

APPENDIX 33

Classroom Teacher Opinions on Contents of the Teachers Manual for the Sign Language Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Daily lesson plans	4	
Discussion questions	1	
Identification list and questions for slides	1	
Student Handbook	1	
Response keys	1	
Suggested activities	1	
No page numbers for reference		6
No sample answer sheets		3
Difficulty in following activities sequence		1
No relationship between objectives and purpose		1
No correlation between title in handbook and manual		1
Training and background in content areas		2
None	1	
No response	4	2

APPENDIX 34

Classroom Teacher Opinions of Activities in the International Languages Unit

	Frequencies	
Ability	Most Successful	Least Successful
Worksheet # 2B: Constructing Sentences in Esperanto	2	
Worksheet # 2C: Learning a vocabulary: Nouns	1	
Worksheet # 3B: Learning a vocabulary: More nouns	1	
Worksheet # 3C: Learning a vocabulary: Numbers	1	
Worksheet # 4B: Prefixes and adjectives	1	
Worksheet # 5: Esperanto endings	2	
Worksheet # 7B: Sentence construction		2
Worksheet # 8B: Pig Latin		1
Worksheet # 9A: A mini-artificial language		1
Worksheet #11C: Compounds fractured		1
Worksheet #11D: Calling your relatives names I		1
Worksheet #11E: Calling your relatives names II		1
Worksheet #13A: Grammar in Esperanto	1	1
Worksheet # 14: Inventing a new language		1
Worksheet # A2: Learning Esperanto words for parts of body		1
Worksheet # B3: How words are made		1
Worksheet # B4: Esperanto and English words equivalents		1

APPENDIX 34(continued): Classroom Teacher Opinions of Activities in the International Languages Unit

Ability	Frequencies Most Successful	 Least Successful
Worksheet # B5: Esperanto and English words endings		1
Worksheet # B8:		1
Worksheet #B10:		2
Worksheet # C: Esperanto	1	
Worksheet # C2: Translating English to Esperanto	2	
Dialogue to tapes and slides	3	
Activities with list of words and one-word answers	1	
Indian sign language	1	

APPENDIX 35

Classroom Teacher Opinion on Contents of the Teachers Manual for the International Languages Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Daily lesson plans	3	1
Answer key	2	
Suggested activities	1	
Suggested materials	1	
Flowchart	1	1
Stated Objectives	1	
Lack of Index tabs for folder		1
Lack of English-Esperanto dictionary		1
Lack of handbook with English translations		1
Lack of answers after each activity		1
Defective materials (answer key)		1

APPENDIX 36

Classroom Teacher Opinions of Activities on the Sounds Unit

Activity	Frequencies	
	Most Successful	Least Successful
Worksheet # 6: Do it yourself poem		2
Worksheet # 7: Flebber, Glump, & Slig		1
Worksheet # 8: Where do words come from ?		1
Worksheet # 9: Voice Variations	2	1
Worksheet #12: Rhino on the rampage	2	
Worksheet #13: Follow the bouncing ball		2
Worksheet #15: Picture puzzles	1	2
Worksheet #17: Nonsense meanings	1	1
Worksheet #19: Sounds & Instruments	2	
Worksheet #21: Scientific experiments	4	3
Worksheet #22: Musical instruments	2	
Worksheet #27: How English consonants are made		1
Worksheet #28: Vowel bingo	4	1
Worksheet #30: Tic-tac-toe	2	
Student Handbook P. 17: Dialogue 2 - Splock	1	
Student Handbook P. 30: Dialogue 3 - The Combo	1	
Student Handbook P. 63: Adventures of Cart 101	2	
Student Handbook P. 95: Sound sequences		1
Student Handbook P. 96: Reading Dialectical writing	1	5

APPENDIX 36 (continued): Classroom Teacher Opinions of Activities on the Sounds Unit

Activity	Frequencies	
	Most Successful	Least Successful
Student Handbook P. 102: No Speaking-no hearing	1	
All of 1st week's activities	1	
Writing Radio plays	2	2
Card games	1	1
Cart 34	1	
Transparencies	1	
Dialogue with slides & tapes	1	
Russian Soldiers' dance		3
Comic Strip		1
No response		1
None		1
All	1	

APPENDIX 37

Classroom Teacher Opinions on Centents of the Teachers Manual for the Sounds Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Daily lesson plans	6	
Organizational format	45	
Answer key	2	
Alert week	2	
Directions	1	
Flowchart		2
Appendix		1
No response	1	6
All	1	

APPENDIX 38

Classroom Teacher Opinions of Activities in the Dialects Unit

	Frequencies	
Activity	Most Successful	Least Successful
Worksheet # 5: Malihini word guide		1
Worksheet # 6: What's my name?	5	
Worksheet # 7: What words do you use?	3	
Worksheet #25: How's your Hawaiian?	1	
Worksheet #28: Dialect of different things	3	
Worksheet #29: What time is it?		1
Worksheet #32: Versatile you		2
Worksheet #40, 42, 43, 45: Dialect & Context I, II, III, IV	2	1
Worksheet #51: Your Rap		1
Worksheet #52: Greetings		1
Worksheet #54: Variations in meanings	1	
Worksheet #59: Language Ladders		1
Worksheet #61: Hawaiian Borrowings	1	
Worksheet #64: Inventory of new terms	3	
Worksheet #75: Can you understand can't?		3
Worksheet #78: Who's talking ?	1	
Worksheet #82: Island English	1	
Worksheet #86: Dialect of _____	1	1
Card games	3	2
Jumblies (worksheet #'s 21, 39, 50, 61, 67, 76)	3	1

APPENDIX 38 (continued): Classroom Teacher Opinions of Activities in the Dialects Unit

Activity	Frequencies	
	Most Successful	Least Successful
Research & reporting	2	4
Brainstorming	1	
Spot the Speaker	1	1
Understanding word definitions	1	
American Speaking record	1	2
Tape on Island Burlesque	2	
Tape on The Candidate Speaker	2	
Games	1	
ETV	3	2
Interviews	1	
Dialogue guessing sex & age	1	
Listening to tapes		5
Pidgin dialect stories in workbook		2
Pronunciation system		1
New Guinea Pidgin		2
Presenting situations for different audiences		1
Research in making words typical of Hawaiian		1
Diagnosing dialects		1
Making your own dialect		1
Oral versus written English		1

APPENDIX 39

Classroom Teacher Opinions on the Contents of the Teachers Manual for the Dialects Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Daily lesson plans	4	1
Suggested activities	2	
Answer key	2	
Overview of the Unit	2	
Organization of the manual	2	
Enrichment tests	1	
Research themes	1	
All	1	
No response		2
Weekly charts		1
Script booklets		1
ETV dialogue		1

APPENDIX 40

Classroom Teacher Opinions of Activities in the Symbols Systems Unit

Activity	Frequencies	
	Most Successful	Least Successful
Activity A-1: Eater's Club symbols		1
Activity A-3: Picture Puzzle	3	
Activity A-4: Different kinds of meanings		1
Activity A-7: Making simple symbols		2
Activity A-11: Easy and hard symbols to learn		2
Activity A-13: Making new symbols	1	
Activity A-15: Individual projects	2	2
Activity B-1: Classifying signs		1
Activity B-2: What does an arrow mean?		1
Activity B-4: Messages in sound checklist (tape)	3	
Activity B-6: Comic sound symbols	1	
Activity B-9: Military symbols	1	
Activity B-10: Silly road signs	1	
Activity B-12: Coat of arms		1
Activity B-14: Using map symbols		1
Activity B-16: Research & reporting in special topics		2
Activity C-1: Guess which words go together	1	
Activity C-4: Decoding a strange symbol message	1	1
Activity C-5: Learning a new writing symbol		2

APPENDIX 40 (continued): Classroom Teacher Opinions of Activities in the Symbols Systems Unit

Activity	Frequencies	
	Most Successful	Least Successful
Activity C-7: Dictionary	1	
Activity C-8: He's a Sweet Girl	1	
Activity C-10: Origin and changes in symbols		2
Activity C-12: Sementology		1
Activity C-13: Rehus Writing	1	
Activity C-14: The flag poll	1	
Olympic card game	4	
Slide dialogue	1	
Day 3 activities	1	
Day 9 activities	1	
Special symbols systems	1	
Non-visual symbols		1
Culminating activity		1

APPENDIX 41

Classroom Teacher Opinions of Activities in the Social Uses of Language Unit

	Frequencies	
Activities	Most Successful	Least Successful
Activity #1: The social uses of Language	2	
Activity #3: What are you really saying?	2	
Activity #4: Attention signals		1
Activity #5: Social Words in different languages		1
Activity #6: What would you say?	2	
Activity #7: I'm in Japan	1	1
Activity #8: A conversation in old Hawaii		4
Activity #10: A Hawaiian Kohea		6
Activity #11: Expressing emotions		6
Activity #12: Social Expressions in music	3	5
Activity #13: Getting out of doing things		5
Activity #14: Cliche' card games	3	
Activity #16: Animal cliche' lotto	6	
Activity #17: What plants are like		1
Activity #18: Common sayings	3	
Activity #19: Ordered phrases	2	
Activity #24: Illustrating cliche's	1	
Activity #25: Proverb matching game	1	
Activity #27: Hawaiian Proverbs		1
Activity #28: Proverb guessing game	2	

APPENDIX 41 (continued): Classroom Teacher Opinions of Activities in the Social Uses of Language Unit

Activities	Frequencies	
	Most Successful	Least Successful
Activity #30: Proverb skits	1	1
Activity on page 75: How many social expressions can you find?	1	
Activity on page 1: Puzzles and riddles	1	
Card games	1	
Group projects	1	
Discussion of slides		1

APPENDIX 42

Classroom Teacher Opinions on the Contents of the Teachers Manual for the Social Uses of Language Unit

Content Areas	Frequencies	
	Most Helpful	Least Useful
Suggestions for daily procedures	3	
Description of activities	2	
Guide questions for discussion	2	
Objectives	2	
Flow chart	1	
Overview	1	
Card games instructions	1	
Organization	1	4
List of activities		1
Slide script		1
Daily instructions and goals		1
No response		2
None		1

APPENDIX 43

Schools Used in Testing Terminal Activities of the Purposeful Writing, Level B, Subprogram

District	Schools
Honolulu	Anuenue Palolo
Central	Kipapa
Leeward	Makakilo Pohakea
Windward	Kahuku
Hawaii	Honokaa
Maui	Puunene
Kauai	Kilauea
Molokai	Kilohana

APPENDIX 44

Percentages of Pupils Completing Various Language Skills Components and Meeting Behavioral Criteria for Self-direction*

	Kindergarten																		First Grade																	
	Waiakea N=32 Ratings			Non-Waiakea N=28 Ratings			Waiakea Low IQ N=13 Ratings			Non-Waiakea Low IQ N=21 Ratings			Waiakea High IQ N=19 Ratings			Non-Waiakea High IQ N=7 Ratings			Waiakea N=24 Ratings			Non-Waiakea N=36 Ratings			Waiakea Low IQ N=18 Ratings			Non-Waiakea Low IQ N=15 Ratings			Waiakea High IQ N=6 Ratings			Non-Waiakea High IQ N=21 Ratings		
Language Skills Components:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Visual discrimination of big letters	100			100			100			100			100			100			100			100			100			100			100			100		
2. Visual discrimination of words	100			100			100			100			100			100			100			100			100			100			100			100		
3. Recognition of words, phrases, and short sentences level 1	59	9	31	70	22	7	38	8	54	60	30	10	74	11	15	100			96		4	94	3	3	94		6	93		7	100			95	5	
4. Recognition of words, phrases, and short sentences level 8	25		75	37	7	56	15		85	20	10	70	32		68	86		14	79		21	83	5	11	78		22	73	13	13	83		17	90		10
5. Consonant clusters level 3	3		97	11		89			100	10		90	5		95	14		86	38	8	54	22		78	28	6	66	20		80	66	17	17	24		76
6. Instructional Library level 1	6	3	91	18	7	74			100	10	5	85	11	5	84	43	14	43	63	8	29	36	28	36	56	11	33	33	20	47	83		17	38	33	29
7. Instructional Library level 3	3		97	15	4	81			100	10		90	5		95	29	14	57	38		62	28	5	67	33		66	20	7	73	50		50	33	5	62
8. Instructional Library level 10			100		4	96			100		5	95			100			100	13		87	5	5	89	6		94			100	33		67	10	10	80
9. Instructional Library level 19			100			100			100			100			100			100			100	3		97			100			100			100	5		95
10. Instructional Library level 23			100			100			100			100			100			100			100			100			100			100			100			100
11. SRA Satellite Kit level B			100	4		96			100	5		95			100			100	17		83	5	3	92	11		89		7	93	33		67	10		90
12. SRA Satellite Kit level F			100			100			100			100			100			100		4	96	3		97			100			100		17	83	5		95
13. SRA Booklets tan level			100			100			100			100			100			100			100			100			100			100			100			100
14. SRA Booklets red level			100			100			100			100			100			100			100			100			100			100			100			100

APPENDIX 44 (Continued): Percentages of Pupils Completing Various Language Skills Components and Meeting Behavioral Criteria for Self-direction*

	Kindergarten																		First Grade																	
	Waiakea N=32 Ratings			Non-Waiakea N=28 Ratings			Waiakea Low IQ N=13 Ratings			Non-Waiakea Low IQ N=21 Ratings			Waiakea High IQ N=19 Ratings			Non-Waiakea High IQ N=7 Ratings			Waiakea N=24 Ratings			Non-Waiakea N=36 Ratings			Waiakea Low IQ N=18 Ratings			Non-Waiakea Low IQ N=15 Ratings			Waiakea High IQ N=6 Ratings			Non-Waiakea High IQ N=21 Ratings		
Language Skills Components:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
15. SRA Booklets Green level			100			100			100			100			100			100			100			100			100			100			100			100
16. SRA Booklets Silver level			100			100			100			100			100			100			100			100			100			100			100			100
17. Cursive writing (small letters)	50	44	6	33	48	19	31	54	15	30	55	15	63	37		42	29	29	87	13		75	19	5	83	17		67	20	13	100			80	20	
18. Cursive writing (letter combination)	19	6	75	19	7	74			100	20	5	75	32	11	57	14	14	71	58	13	29	56	16	28	56	11	33	40	20	40	67	17	16	67	14	19
19. Cursive writing (words)	6	9	84	7	15	78			100	10	15	75	11	15	74		14	86	17	41	41	22	31	47	17	39	44	27	13	60	17	50	33	19	43	38
20. Cursive writing of paragraphs from readers		3	97		7	93			100		10	90		5	95			100		17	83	5	11	83		17	83	7	7	86		17	83	5	14	81
21. Purposeful writing level 30			100			100			100			100			100			100			100			100			100			100			100			100
22. Purposeful writing level 82			100			100			100			100			100			100			100			100			100			100			100			100
23. BRL Spelling level 3			100			100			100			100			100			100		8	92		3	97		6	94			100		17	83		5	95
24. BRL Spelling level 7			100			100			100			100			100			100			100			100			100			100			100			100
25. Dialect markers level 15	59	12	28	22	19	59	31	23	46	20	25	55	79	5	16	29		71	92	4	4	53	11	36	94		6	47	27	26	100			57		43
26. English sounds level 35	68	10	22	22	22	56	42	25	33	20	20	60	84		16	29	29	42	100			36	22	42	100			20	40	40	100			47	10	43
27. Plurals in listening and speaking	100			70	7	22	100			65	10	25	100			86		14	100			75	17	8	100			53	27	20	100			90	10	
28. Determiners in listening and speaking	25	16	59	22	4	74	8		92	15	5	80	37	26	37	42		57	46	33	21	5	5	89	39	33	28		7	93	67	33		10	5	85
29. Prepositions in listening and speaking	6	41	53		4	96	8	8	84		5	95	5	63	37			100	17	66	17	6	8	86	11	72	17		13	87	33	50	17	10	5	85

APPENDIX 44(continued): Percentages of Pupils Completing Various Language Skills Components and Meeting Behavioral Criteria for Self-direction*

	Kindergarten																		First Grade																	
	Waiakea N=32 Ratings			Non-Waiakea N=28 Ratings			Waiakea Low IQ N=13 Ratings			Non-Waiakea Low IQ N=21 Ratings			Waiakea High IQ N=19 Ratings			Non-Waiakea High IQ N=7 Ratings			Waiakea N=24 Ratings			Non-Waiakea N=36 Ratings			Waiakea Low IQ N=18 Ratings			Non-Waiakea Low IQ N=15 Ratings			Waiakea High IQ N=6 Ratings			Non-Waikea High IQ N-21 Ratings		
Language Skills Components:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
30. Task-Oriented Communication level 13		25	75		22	78		16	84		20	80		32	68		29	71		41	58	5	22	72		39	61		40	60		50	50	10	10	80
31. Grammar: Verbs level 4	9	6	84			100			100			100	16	11	73			100	4	17	79			100		17	83			100	17	17	66			100
32. Grammar: Word differences			100		22	78			100		15	85			100		43	57	17	13	70	22	33	44	17	11	72	7	33	60	17	17	66	33	33	33
33. Intonation			100			100			100			100			100			100			100			100			100			100			100			100
34. Dialect Variations			100		11	89			100		10	90			100		14	86	4		96		14	86			100		20	80	17		83		10	90
35. Type big letters	37	44	19	15	59	26	23	31	46	10	60	30	47	53		29	57	14	75	21	4	81	8	11	78	17	5	60	13	27	67	33		95	5	
36. Type small letters	3	16	81		11	89		16	84		5	95	5	16	79		29	71	46	25	29	22	56	22	44	28	28	20	33	47	50	17	33	24	71	5
37. Type sentences and paragraphs			100			100			100			100			100			100	4	13	83	3		97	6	11	83	6		94		17	83			100
Self-direction:																																				
1. Selects an activity from those suggested by the teacher.	87	13		93	7		84	16		90	10		89	11		100			100			100			100			100			100			100		
2. Selects independently of the teacher an appropriate activity to begin the day.	62	34	3	64	36		38	54	8	57	43		79	21		86	14		96	4		92	8		94	6		80	20		100			100		
3. Begins work on an activity after selection.	66	31	3	71	29		54	38	8	67	33		74	26		86	14		100			83	17		100			80	20		100			86	14	
4. Goes from one activity to a second appropriate activity without teacher direction.	25	66	9	46	46	7		84	16	38	52	10	42	53	5	71	29		75	25		72	28		72	28		67	33		83	17		76	24	
5. Selects all activities during one two-hour period without need for teacher direction.	12	78	9	46	32	21		84	16	33	43	24	21	74	5	86		14		39	61	33	64	3	33	67		33	67		60	40		33	62	5

APPENDIX 44(continued): Percentages of Pupils Completing Various Language Skills Components and Meeting Behavioral Criteria for Self-direction*

	Kindergarten																	
	Waiakea			Non-Waiakea			Waiakea Low IQ			Non-Waiakea Low IQ			Waiakea High IQ			Non-Waiakea High IQ		
	N=32 Ratings			N=28 Ratings			N=13 Ratings			N=21 Ratings			N=19 Ratings			N=7 Ratings		
Self-direction:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
6. Locates the materials he needs on his own.	66	34		71	29		54	16		62	38		74	26		100		
7. Picks up work where he last left off.	75	22	3	71	25	4	54	38	8	62	33	5	89	11		100		
8. Makes his own program tag.	34	62	3	39	46	14	23	69	8	28	52	19	42	58		71	29	
9. Locates a tutor when he needs one.	50	47	3	50	39	11	31	61	8	38	48	14	63	37		86	14	
10. Attempts to solve problems before going to the teacher for help.	47	44	9	39	54	7	31	54	15	2	62	10	58	37	5	71	29	
11. Solves problems on his own without going to the teacher.	44	47	9	32	50	18	23	61	16	24	57	19	58	37	5	57	29	14
12. Solves problems with the help of others without going to the teacher.	50	44	6	43	43	14	38	46	16	38	43	19	58	42		57	42	
13. Asks the teacher for help when he needs it.	66	34		82	14	4	54	46		76	19	5	74	26		100		
14. Uses equipment and/or materials properly.	75	22	3	75	21	4	61	31	8	67	28	5	84	16		100		
15. Locates a checker when he needs one.	47	44	9	50	39	11	31	54	15	43	43	14	58	37	5	71	29	
16. Moves his program tag appropriately.	82	12	6	64	29	7	61	23	16	57	33	10	95	5		86	14	
17. Puts materials away when he finishes working.	81	19		78	21		69	31		71	28		89	11		100		
18. Records his program completion.	72	25	3	46	46	7	54	38	8	38	52	10	84	16		71	29	
19. Helps other children learn.	75	19	6	64	32	4	54	31	15	52	43	5	89	11		100		

	First Grade																	
	Waiakea			Non-Waiakea			Waiakea Low IQ			Non-Waiakea Low IQ			Waiakea High IQ			Non-Waiakea High IQ		
	N=24 Ratings			N=36 Ratings			N=18 Ratings			N=15 Ratings			N=6 Ratings			N=21 Ratings		
Self-direction:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
6. Locates the materials he needs on his own.	100			92	8		100			80	20		100			100		
7. Picks up work where he last left off.	96	4		83	17		94	6		60	40		100			100		
8. Makes his own program tag.	100			78	22		100			67	33		100			86	14	
9. Locates a tutor when he needs one.	92	8		64	36		94	6		60	40		83	17		67	33	
10. Attempts to solve problems before going to the teacher for help.	79	21		61	33	6	78	22		47	47	6	83	17		71	24	5
11. Solves problems on his own without going to the teacher.	50	50		25	69	6	50	50		13	80	7	50	50		33	62	5
12. Solves problems with the help of others without going to the teacher.	58	42		28	64	8	56	44		20	73	7	67	33		33	57	10
13. Asks the teacher for help when he needs it.	83	17		89	11		83	17		73	26		83	17		100		
14. Uses equipment and/or materials properly.	88	12		89	11		89	11		73	27		83	17		100		
15. Locates a checker when he needs one.	75	25		39	58	3	78	22		33	60	7	67	33		43	57	
16. Moves his program tag appropriately.	96	4		83	14	3	94	6		60	33	7	100			100		
17. Puts materials away when he finishes working.	92	8		83	17		94	6		60	40		83	17		100		
18. Records his program completion.	92	8		83	11	6	89	11		67	20	13	100			95	5	
19. Helps other children learn.	88	12		69	31		89	11		53	47		83	17		80	19	

APPENDIX 44(continued): Percentages of Pupils Completing Various Language Skills Components and Meeting Behavioral Criteria for Self-direction*

	Kindergarten						First Grade					
Self-direction:	Waiakea N=32 Ratings 1 2 3	Non-Waiakea N=28 Ratings 1 2 3	Waiakea Low IQ N=13 Ratings 1 2 3	Non-Waiakea Low IQ N=21 Ratings 1 2 3	Waiakea High IQ N=19 Ratings 1 2 3	Non-Waiakea High IQ N=7 Ratings 1 2 3	Waiakea N=24 Ratings 1 2 3	Non-Waiakea N=36 Ratings 1 2 3	Waiakea Low IQ N=18 Ratings 1 2 3	Non-Waiakea Low IQ N=15 Ratings 1 2 3	Waiakea High IQ N=6 Ratings 1 2 3	Non-Waiakea High IQ N=21 Ratings 1 2 3
20. Accepts learning from other children.	84 12 3	86 10 4	76 16 8	81 14 5	89 11	100	88 12	86 14	83 17	80 20	100	90 10
21. Reports at lease one activity he worked on during the two-hour period.	94 6	89 7 4	84 16	85 10 5	100	100	92 8	86 16	94 6	93 7	83 17	100
22. Reports more than one activity.	84 12 3	54 36 10	76 16 8	43 43 14	89 11	86 14	88 12	83 17	89 11	67 33	83 17	95 5
23. Reports all the activities he worked on during a two-hour period.	16 75 9	46 25 29	76 23	33 33 33	26 74	86 14	50 50	67 25 8	44 56	40 40 20	67 33	86 14
24. Demonstrates his recognition of other activities he could have worked on.	28 56 16	32 43 25	15 54 31	19 52 28	37 58 5	71 14 14	38 62	38 56 6	39 61	20 67 13	33 67	52 48
25. Appraises his own activities and demonstrates that he has considered the implication for future planning.	3 78 19	21 54 25	69 31	14 57 28	5 84 11	43 43 14	21 54 25	6 80 14	17 61 22	7 73 20	33 33 33	5 86 9

* Only pupils who received ratings of 1 completed the various language skills components or met the behavioral criteria for self-direction.

APPENDIX 45

Percentages of Waiakea Pupils Completing the Various Language Skills Components and Meeting Criteria for Self-Direction*

	Kindergarten												First Grade											
	1969-1970 Samples									1970-1971 Total Sample			1969-1970 Samples									1970-1971 Total Sample		
	Boys			Girls			Total Sample						Boys			Girls			Total Sample					
	N=24 Ratings			N=30 Ratings			N=54 Ratings			N=32 Ratings			N=12 Ratings			N=11 Ratings			N=33 Ratings			N=24 Ratings		
Language Skills Components:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Visual Discrimination of big letters of the alphabet.	96	4		100			98	2		100			100			100			100			100		
2. Visual discrimination of words.	92	4	4	97	3		94	4	2	100			100			100			100			100		
3. Recognition of words, phrases, and short sentences - level 1.	58	17	25	63	7	30	61	11	28	59	9	31	92		8	82		18	87		13	96		4
4. Recognition of words, phrases, and short sentences - level 8.	33		67	20	3	77	26	2	72	25		75	58	8	33	73		27	65	4	30	79		21
5. Consonant clusters.	13	4	83	17		83	15	2	83	3		97	25	8	67	55		45	39	4	57	38	8	54
6. Instructional library level 1.	8	4	88	13	3	83	11	4	85	6	3	91	33		67	55		45	43		57	63	8	29
7. Instructional library level 3.		4	96	3	3	93	2	4	94	3		97	8	25	67	55		45	30	13	57	38		62
8. Instructional library level 10.			100			100			100			100			100	27		73	13		87	13		87
9. SRA satellite kit level B.			100	3		97	2		98			100	8		92	27		73	17		83	17		83
10. SRA satellite kit level F.			100			100			100			100	8		92	9	9	82	9	4	87		4	96
11. Cursive writing (small letters) book 2.		4	96	3	7	90	2	6	92	50	44	6	58	8	33	45	9	45	52	9	39	87	13	
12. Cursive writing (letter combination) book 4.		4	96			100		2	98	19	6	75	50	8	42	64	9	27	56	9	35	58	13	29
13. Cursive writing of paragraph from readers.			100			100			100		3	97		18	82	9	9	82	4	14	82		17	83
14. Type big letters.	50	33	17	40	43	17	44	39	17	37	44	19	75	8	17	82		18	78	4	17	75	21	4
15. Type small letters	4	4	92	3	23	73	4	15	81	3	16	81	8	42	50	18	36	45	13	39	48	46	25	29

APPENDIX 45(continued): Percentages of Waiakea Pupils Completing the Various Language Skills Components and Meeting Criteria for Self-Direction*

	Kindergarten												First Grade											
	1969-1970 Samples									1970-1971			1969-1970 Samples									1970-1971		
	Boys			Girls			Total Sample			Total Sample			Boys			Girls			Total Sample			Total Sample		
	N=24 Ratings			N=30 Ratings			N=54 Ratings			N=32 Ratings			N=12 Ratings			N=11 Ratings			N=33 Ratings			N=24 Ratings		
Self-Direction:	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Selects all activities during one two-hour period without need for teacher direction.	33	63	4	53	47		44	54	2	12	78	9	33	67		27	73		30	70		39	61	
2. Begins work on an activity after selection.	37	50	13	60	37	3	50	43	7	66	31	3	25	75		45	55		35	65		100		
3. Asks the teacher for help when he needs it.	50	46	4	70	30		61	37	2	66	34		50	50		27	64	9	39	56	4	83	17	
4. Goes from one activity to a second appropriate activity without teacher direction.	21	71	8	20	70	10	20	70	10	25	66	9	25	75		18	73	9	22	74	4	75	25	
5. Helps other children learn.	33	58	8	50	43	7	43	50	7	75	19	6	50	50		36	55	9	43	52	4	88	12	
6. Records his program completion.	43	50	8	37	60	3	39	55	6	72	25	3	67	33		64	36		65	35		92	8	
7. Appraises his own activities and demonstrates that he has considered the implications for future planning.	33	54	13	43	43	13	39	48	13	3	78	19	33	67		27	73		30	70		21	54	25

* Only pupils who received ratings of 1 completed the Language Skills components or met criteria for self-direction.

APPENDIX 46

Cost Data for the Waiakea Learning Center and an HEP Self-Contained Classroom*

	Waiakea Learning Center		Self-Contained	
	No. of Units Per Classroom	Dollar Cost Per Classroom	No. of Units Per Classroom	Dollar Cost Per Classroom
Materials:				
Reading Programs				
YN-1 Stack Mode	4	$26.40	2	$13.20
YN-2 Stack Mode	5	32.50	2	13.00
YN-3 Stack Mode	4	34.20	2	17.10
SL-1	3	32.10	1	10.70
SL-2 (SL-A)				
Stack Mode	1	7.50	1	7.50
LM Mode	1	4.65	1	4.65
BL-1	3	32.10	1	10.70
BL-2 (BL-A)				
Stack Mode	1	7.50	1	7.50
LM Mode	1	4.65	1	4.65
N-1A	1	11.75	2	23.50
N-1B Stack Mode	2	17.10	1	8.55
LM Mode	2	10.40	1	5.20
CC-1	1	8.55	1	8.55
CC-2	1	9.60	1	9.60
CC-3	1	9.60	1	9.60
PC-1	4	26.40	2	13.20
PC-2	4	30.00	2	15.00
Diagnostic Stack Dla	1	4.30	1	4.30
RWC-1 Stack Mode	1	7.50	2	15.00
RWC-2	1	7.50	1	7.50
RWC-3	1	8.55	1	8.55
RWC-4	1	7.50	1	7.50
RWC-5	1	7.50	1	7.50
RWC-6	1	8.55	1	8.55
RWC-7	1	8.55	1	8.55
RWC-8	1	9.60	1	9.60
RWC-9	1	8.55	1	8.55
RWC-10	1	8.55	1	8.55
RWC-11	1	9.60	1	9.60
RWC-12	1	8.55	1	8.55
RWC-13	1	9.60	1	9.60
RWC-14	1	9.60	1	9.60
RWC-15	1	9.60	1	9.60
RWC-16	1	10.70	1	10.70
RWC-17	1	9.60	1	9.60
RWC-18	1	10.70	1	10.70

APPENDIX 46 (Continued): Cost Data for the Waiakea Learning Center and an HEP Self-Contained Classroom*

	Waiakea Learning Center		Self-Contained	
	No. of Units Per Classroom	Dollar Cost Per Classroom	No. of Units Per Classroom	Dollar Cost Per Classroom
Materials:				
RABC Total	2	180.00	1	90.05
RABC 1-4 (Wgt.=30/550)				
RABC 5 (2/550)				
RABC 6-37 (184/550)				
RABC 38 (12/550)				
RABC 39-114 (322/550)				
Language Master Books	2	164.60	1	82.30
Taped Books	2	110.00	1	55.00
Phrases and Sentences	2	12.10	1	6.05
SRA BRS	2	110.68	1/2	27.67
SRA-IIA	1	2.60	1	2.60
Instructional Library	2	1251.68	1	625.84
Typewriting Programs				
Type Check	6	25.20	1	4.20
BL-1, 2	4	28.00	1	7.00
SL-1, 2	4	27.00	1	6.75
Typing Letters and Words (BL/SL)	4	27.00	1	6.75
Typing Sentences and Paragraphs	4	27.00	1	6.75
Handwriting Programs				
WN-1 Book Mode	5	25.00	2	10.00
Film Mode	1	12.51	1	12.51
Flock Card	2	14.00	1	7.00
CW-SL-2				
Book Mode	2	21.00	2	21.00
Film Mode	2	65.02	1	32.51
Flock Card	2	36.60	1	18.30
CW-BL-3				
Book Mode	6	63.00	2	21.00
CW-LC-4				
Book Mode	3	31.50	2	21.00
Film Mode	3	78.78	1	26.26
CW-Words-5				
Book Mode	3	7.50	1	2.50
MW-SL-2				
Book Mode	2	22.00	2	22.00
Flock Card	1	18.30	1	18.30

APPENDIX 46 (Continued): Cost Data for the Waiakea Learning Center and an HEP Self-Contained Classroom*

	Waiakea Learning Center		Self-Contained	
	No. of Units Per Classroom	Dollar Cost Per Classroom	No. of Units Per Classroom	Dollar Cost Per Classroom
Materials:				
MW-BL-3 Book Mode	5	55.00	2	21.00
MW-LC-4 Book Mode	5	42.50	2	17.00
LD-1	1	8.00	1	8.00
LD-2	1	10.00	1	10.00
LD-3	1	8.00	1	8.00
Cursive Letter Combination Cards	1	3.00	1	3.00
Letter Recognition LM Mode	1	14.04	1	14.04
CW Reader Paragraphs	3 }		1 }	
MW Reader Paragraphs	3 }	4.05	1 }	1.35
Student Exercise Books (45)	6	121.50	1	20.25
Punctuation	3	63.00	1	21.00
Capitalization	3	60.00	1	20.00
Spelling	3	44.70	1	14.90
Purposeful Writing	2	181.00	1	90.50
Aural/Oral Programs				
Colors and Shapes	2	86.66	1	43.33
Sounds of English Dialect Markers	2	92.66	1	46.33
Sounds of English English	2	138.28	1	69.14
Plurals	2	37.28	1	18.64
Prepositions	3	54.24	1	18.08
Songs Programs	2	11.50	1	5.75
Miscellaneous				
Language Skills Manual	2	15.00	1	7.50
Class Record Sheet	4	.40	1	.10
Student Record Folders	200	50.00	40	10.00
Student Report Cards	200	30.00	40	6.00
Total Costs for Materials:		$3,961.58		$1,962.55

APPENDIX 46 (Continued): Cost Data for the Waiakea Learning Center and an HEP Self-Contained Classroom*

	Waiakea Learning Center		Self-Contained	
	No. of Units Per Classroom	Dollar Cost Per Classroom	No. of Units Per Classroom	Dollar Cost Per Classroom
Equipment:				
Cassette Playback and Recorder	4	$ 632.00	1	$ 158.00
Cassette Playback	8	1,064.00	2	266.00
Electric Typewriter	6	1,023.36	1	170.56
Super 8mm Cartridge Projector with Screen and Instructions	2	386.32	1	193.16
Headset-Plug-in Type	49	597.80	12	146.40
Sound Bar AJB4V (4-outlet)	10	72.90	2	14.58
Power Bar	7	50.75	2	14.50
Audio Card Reader	7	1,750.00	2	500.00
Total Costs for Equipment:		$5,577.13		$1,463.20
Total Costs:		$9.538.71		$3,425.75

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* Costs of the various units of materials and equipment as well as the total costs for the self-contained classroom were provided by a cost-effectiveness study of the HEP Language Skills program conducted in the Summer and Fall of 1970.

APPENDIX 47

Achievement Levels of Sample Grades K-3 Pupils Using the BH-EFI-SG Audio-Reader Mode

		Reading																				IM CLR		Listening/Speaking						Sounds of English														Ns by Grade Level
		BL	SL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	2	C&S		PREP		PL		E 1-10		E 11-20		E 21-30		E 31-35		DM 1-5		DM 6-10		DM 11-15		
																								L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	
LM Grade K	NN																													2		1												10
	IP	6	6								1											2		7	1			3	2	4	1							1						
	C	3	3																									3	1															
Grade 1	NN	7	6	3	3	3	3	3	3	2	2	2	2	2	1	1	1					1	1	7	3	1	1	3	3	3	1	2	1	2	1	2	1	2	1	2	1	2	1	9
	IP	1	2	2						1					1			1				4	1		2				1	2	1	1			1			1	1			1		
	C	1	1																						1			3	2	1	1	1	1	2		2		3	1	3	1	2		
Grade 2	NN	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	2	3	3	2	2	1	2	1	2	1	2	1	2	2	2	1	2	1	5
	IP																														2													
	C																																								1		1	
Grade 3	NN	15	15	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	6	6	7	7	13	13	8	8	11	11	5	5	5	5	5	5	5	5	11	11	10	10	9	9	15
	IP																									2	1													1		1	1	
	C		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					2	2	2	2	7	7	7	7	7	7	7	7	2	2	2	2	1	1	
LEI Grade K	NN	2																																										11
	IP	7	7																					10																				
	C																							1																				
Grade 1	NN	11	11																			1						3	3	7	5	5	3	1				5	3	2				15
	IP	1																						2				3		4	2			5	1	2		5	2	2	1	1		
	C																							2	2			5		1		2		1										
Grade 2	NN	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	4	4																			4
	IP				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																							
	C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1																												
SG Grade K	NN	1	1																					1														1		1		1		2
	IP																					1		1	1	1			1									1						
	C	1	1																			1	1				1	2																
Grade 1	NN																																											3
	IP		1																			1		2	1	1			2	1								3						
	C	3	2																			2	2	1				2																
Grade 2	NN	8	8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6	6	8	8	6	5	7	4	5	4	5	3	4	3	4	3	7	4	4	3	3	1	8
	IP			3																						1	3						1	1					2	1	1		2	
	C																					2	2			1			1											1		2		

NN = Not Needing
IP = In Progress
C = Completed

APPENDIX 48

Schools and Classes Participating in the Purposeful Writing, Level B, Subprogram Teacher Questionnaire Evaluation

School	No. of Classes	Class Organization
Kapaa	5	3/2:Gr 2-3
Makaha	3	3/2:Gr K-3
Shafter	4	3/2:Gr K-3
Kalihi-Uka	3	Team:Gr 3
Kualapuu	1	5/4:Gr K-3
	1	3/2:Gr 2-3
Kilohana	1	4/4:Gr K-3
Maunaloa	1	5/4:Gr K-3
Royal	1	3/2:Gr 2-3
University Lab School	1	SC:Gr K-3
	1	SC:Gr 2-3
Kaunakakai	3	3/2:Gr 1-3

Appendix 49

Percentage of HEP Pupils Completing or Not Needing the Various Language Skills for the 1970-71 School Year

	TOTAL SAMPLE									
	Kindergarten			First Grade			Second Grade		Third Grade	
Language Skills Components:	I N=239	F N=194	P N=619	I N=102	F N=215	P N=622	F N=233	P N=380	F N=237	P N=235
1. Visual Discrimination of big letters of the Alphabet	99	100	98	100	99	100	100	99	100	100
2. Visual discrimination of words	96	97	95	100	99	100	100	99	99	100
3. Recognition of words, phrases and short sentences (1)	69	62	63	96	86	93	100	98	98	100
4. Recognition of words, phrases and short sentences (8)	31	28	27	75	66	74	94	91	94	98
5. Consonant clusters	10	6	7	30	32	36	68	68	85	89
6. Instructional Library (1)* - read over four books	16	14	12	48	48	49	87	79	95	96
7. Instructional Library (3) - read over 14 books	9	8	7	32	32	37	76	70	93	91
8. Instructional Library (10) - read over 49 books	3	3	1	8	13	11	45	40	74	78
9. Instructional Library (19) - read over 94 books	1	2	0	2	3	4	21	20	53	53
10. Instructional Library (23) - read over 114 books	0	1	0	1	.5	.6	4	5	22	21
11. SRA satellite kit (B)	2	4	2	10	15	16	53	45	69	75
12. SRA satellite kit (F)	.4	0	.2	2	2	4	19	18	45	47
13. SRA booklets (tan)	0	0	0	1	1	1	15	11	41	44
14. SRA booklets (red)	0	0	0	1	.5	.8	7	8	32	37
15. SRA booklet (green)	.4	0	0	1	.5	0	2	2	16	13
16. SRA booklets (silver)	.4	0	0	1	.5	0	.4	.5	5	7
17. Cursive writing (small letters)	57	61	44	77	91	82	97	92	98	93
18. Cursive writing (letter combination)	24	34	21	45	68	61	87	79	97	92
19. Cursive writing (words)	8	13	9	18	42	34	72	57	92	84
20. Cursive writing of paragraphs from readers	.8	3	1	9	18	12	46	31	75	62
21. Purposeful writing (30)	0	0	0	0	3	2	11	12	52	38
22. Purposeful writing (82)	0	0	0	0	0	.3	4	4	24	17
23. BRL spelling (3)	.4	.5	.2	0	3	2	25	17	41	51
24. BRL spelling (7)	.4	0	0	0	1	.3	8	3	18	18
25. Dialect Markers (15)	32	23	39	25	60	69	81	74	91	80
26. English Sounds (35)	26	24	37	23	62	65	81	67	92	79
27. Plurals	79	71	66	76	80	85	92	77	94	85
28. Determiners	0	15	14	0	22	24	45	45	66	64
29. Prepositions	15	16	5	20	40	18	70	32	82	45
30. Task-oriented communication (13)	.4	4	2	0	20	13	40	27	46	47
31. Grammar: verbs (4)	0	.5	1	0	7	4	31	12	56	31
32. Grammar: word difference	0	2	2	0	16	18	46	31	57	62
33. Intonation	0	5	0	0	19	0	41	.8	65	.8
34. Dialect Variations	0	1	.3	0	5	3	15	6	27	24
35. Type big letters	26	56	19	41	82	59	94	68	94	82
36. Type small letters	5	20	6	16	56	29	73	37	81	55
37. Type sentences and paragraphs	.4	2	.5	1	13	4	27	6	47	14

* Number in parentheses indicates the level of the component.

Appendix 49 (continued): Percentage of HEP Pupils Completing or Not Needing the Various Language Skills for the 1970-71 School Year

BOYS										GIRLS									
Kindergarten			First Grade			Second Grade		Third Grade		Kindergarten			First Grade			Second Grade		Third Grade	
I N=136	F N=96	P N=328	I N=59	F N=104	P N=321	F N=118	P N=209	F N=106	P N=119	I N=103	F N=98	P N=291	I N=43	F N=111	P N=301	F N=115	P N=171	F N=131	P N=116
99	100	98	100	99	100	100	99	100	100	99	100	99	100	100	100	100	100	99	100
96	98	95	100	99	99	100	99	100	100	96	97	96	100	100	100	100	100	98	99
61	53	57	97	88	93	100	97	99	100	79	71	70	95	85	92	100	99	98	99
27	21	22	73	58	70	92	88	94	97	37	35	34	79	73	78	95	95	94	99
10	3	5	27	23	33	59	62	82	86	12	8	10	35	41	40	77	77	87	93
13	8	8	44	39	43	81	73	96	94	19	19	16	53	56	56	92	88	95	97
10	3	5	29	24	31	68	65	93	87	9	13	10	37	40	44	85	77	92	97
2	1	1	7	4	7	34	32	67	70	3	5	1	9	21	15	57	50	80	86
1	0	0	0	1	2	17	14	42	40	1	3	0	5	5	6	25	27	62	66
0	0	0	0	0	.6	5	4	15	14	0	2	0	2	1	.7	3	6	27	28
2	2	2	7	5	12	42	34	61	66	2	5	2	14	24	21	64	57	76	84
0	0	0	0	1	2	15	11	35	41	1	0	.3	5	3	6	23	25	53	53
0	0	0	0	0	.6	13	7	30	35	0	0	0	2	2	2	18	15	50	53
0	0	0	0	0	0	9	5	21	26	0	0	0	2	1	2	5	12	42	47
.7	0	0	0	0	0	2	1	10	11	0	0	0	2	1	0	2	2	21	16
0	0	0	0	0	0	0	1	3	5	1	0	0	2	1	0	1	0	7	9
55	55	36	76	90	79	94	88	99	91	59	66	52	79	92	86	100	96	97	95
20	25	16	34	59	55	82	72	97	88	29	42	26	60	77	67	91	88	97	97
7	7	5	10	34	30	69	47	92	76	9	18	12	28	50	38	75	68	92	91
.7	0	1	5	7	9	38	25	74	55	1	5	1	14	29	16	55	39	76	70
0	0	0	0	1	.6	8	6	40	24	0	0	0	0	5	4	14	20	63	52
0	0	0	0	0	0	3	2	17	12	0	0	0	0	0	.7	5	8	31	23
.7	0	0	0	0	1	19	14	35	42	0	1	.3	0	5	3	31	21	47	60
.7	0	0	0	0	0	6	3	10	14	0	0	0	0	2	.7	10	4	24	22
29	20	38	25	54	72	80	72	93	81	35	26	40	26	65	67	82	76	89	79
23	22	38	19	54	67	80	67	93	79	30	26	37	28	70	62	82	68	91	79
78	69	63	78	79	86	93	78	97	85	82	73	70	74	82	83	91	77	91	84
0	16	12	0	14	24	39	42	71	59	0	14	16	0	30	25	52	49	62	70
15	18	3	17	37	18	62	29	83	44	15	14	6	23	44	18	79	35	82	46
0	5	2	0	15	12	44	26	45	45	1	3	2	0	24	13	36	28	47	50
0	0	.3	0	8	3	27	11	51	31	0	1	2	0	7	4	36	12	60	32
0	3	2	0	18	19	45	31	50	61	0	1	2	0	14	17	48	31	63	64
0	4	0	0	21	0	36	1	64	2	0	5	0	0	17	0	45	0	66	0
0	0	0	0	4	3	15	7	21	21	0	2	.7	0	5	3	14	5	31	27
26	47	13	39	78	55	93	63	95	78	27	65	25	44	86	64	95	74	92	85
1	15	3	17	45	24	66	33	72	51	10	26	8	14	67	34	79	42	89	59
.7	1	.3	0	6	2	19	3	30	5	0	2	.7	2	19	5	34	9	61	24

APPENDIX 50

List of Schools/Classes for the HEP Equipment Questionnaire

District	School	Class Org.	Grade Level(s)	No. of Classes Surveyed	No. of Tchrs. Asked to Complete Questionnaire
Honolulu	Royal	3-on-2	K-1	1	1
		3-on-2	2-3	1	1
		SC	K-1	1	1
	UH Lab Sch.	SC	K-1, K-3, 2-3	1	1
Central	Shafter	3-on-2	K-3	2	2
Leeward	Makaha	3-on-2	K-3	3	3
Windward	Puohala	3-on-2	1-2	2	2
Molokai Complex	Kaunakakai	3-on-2	1-3	1	1
Kauai	Kapaa	3-on-2	2-3	5	5
TOTALS		3-on-2 (7) SC (2)		17	17

APPENDIX 51

Classroom Teacher Responses to Cassette Tape Mode of Learning

Program	Problems with the machine				Teacher rating of the cassette tape mode of learning				
	Many	Some	Very Little	No Response	Excellent	Good	Fair	Poor	No Response
Stop Gap:									
Plurals		2	3	12			3	2	9
Dialect Markers		2	3	12			1	4	9
Sounds of English		2	3	12			1	4	9
Prepositions	1	1	3	12	1		3		10
Colors and Shapes	1	1	4	11	2	1	2		10
Aural/Oral:									
TOC (Pilot)		5	2	10	2	3	1		10
Dialect Variations (Pilot)		2	4	10	1	3	2		8
Style Variations (Pilot)				17					13
TOGD (Field)			1	16		1			13
Writing:									
BL			2	15	1				12
Speed Reading		2		15	1			1	11
Reading:									
Words in Tape	1	2	4	10	2	3	2		6
Tape Books	4	4	3	6	3	5	3		5